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1995

FRONT RANGE PIPELINE

CENEX, INC.

STATE OF MONTANA ENVIRONMENTAL ASSESSMENT

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Prepared By:

Montana Department of State Lands
Montana Department of Health and Environmental Sciences
Montana Department of Natural Resources and Conservation
and
Montana Department of Transportation

Helena, Montana

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DEPARTMENT OF NATURAL RESOURCES
AND CONSERVATION

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P.O. Box 201601
Helena, MT 59620-1601

September 8, 1995

Dear Reader:

In the matter of the Cenex Front Range Pipeline project, Cenex has applied for approvals from three agencies of the State of Montana before constructing certain segments of the pipeline or taking certain actions in regard to the pipeline. These approvals are subject to environmental review under the Montana Environmental Policy Act (MEPA). The agencies and approvals are:

Department of Natural Resources and Conservation (DNRC)

- Cenex must obtain easements from the Board of Land Commissioners for crossing school trust lands.

- Cenex has applied for easements to cross the Missouri and Teton rivers. The beds of these rivers are owned by the state. However, under 69-13-103, MCA, Cenex has authority to lay its pipeline across these rivers without easements.

- Cenex must obtain temporary water rights for hydrostatic pipeline testing from the Water Rights Bureau's regional offices in Havre and Billings.

- Cenex must obtain a letter of permission from the Water Projects Bureau to bore and install the pipeline and cable under the Deadman's Canal.

Department of Environmental Quality (DEQ)

- Cenex must obtain various environmental health permits and authorizations from the Water Quality Division.

Department of Transportation (MDT)

- Cenex has applied for utility occupancy permits for crossing state and federal highways from district offices in Great Falls and Billings. However, under 69-13-103, MCA, Cenex has authority to lay its pipeline across these highways without these permits.

If the agencies grant the necessary easements, permits, and authorizations, the following would result:

- Approximately 162 acres of land in 34 parcels under DNRC's control would be disturbed by construction. Much of this land has been disturbed by pipeline and power line construction before. Reclamation of the disturbance is expected to be prompt and not problematical.

- Crossings of ten highways under the jurisdiction of MDT would be made. Since the pipeline would be bored under the roadway, no disturbance to highway surfaces is anticipated.

- Montana Pollutant Discharge Elimination System Stormwater Construction General Permit Authorizations and 3A authorizations to temporarily exceed water quality standards, issued by DEQ, would contain measures to minimize or prevent impacts to stream water quality.

- Sixty acre-feet of water would be taken from the Marias River and 30 acre-feet from the Yellowstone for hydrostatic testing of the pipeline. DNRC has determined that the water rights of existing users would not be adversely affected.

MEPA requires that actions of state government must receive environmental review before they can be taken. This review may take the form of an environmental assessment (EA) or an environmental impact statement (EIS). An EA was prepared under the supervision of the three agencies listed above. Representatives of these agencies have reviewed the EA and found that it complies with the requirements of MEPA. The EA was made available for public review from July 14 through August 7, and the public review period was extended until August 24. Twenty-two comment letters were received.

Having reviewed the EA and public comments, the agencies have determined that the state actions involved are unlikely to result in significant environmental impacts, and therefore there is no need to prepare an EIS. This conclusion is based on the following:

- Construction activities would be of short duration with prompt reclamation of disturbed areas, including reseeding and weed control, with follow-up treatment if necessary.

- Pipeline materials, construction methods, and testing and inspection measures would meet or exceed the safety standards required by the U.S. Department of Transportation (49 CFR, Part 195 - Transportation of Hazardous Liquids by Pipeline).

- Much of the pipeline's route would coincide with other utility corridors and their previous disturbance. Future pipelines under review pursuant to the Montana Major

Facility Siting Act would generally be at some distance from the Front Range Pipeline.

- Water rights of existing water users would not be adversely affected.

- Impacts to water quality would be temporary and of short duration.

The public comments are summarized and attached, with agency responses, to this letter. Comment 15, raising concern over the wet-ditch method of stream crossing, is the only one judged to be substantive because of sedimentation caused by that crossing method. The response to this comment should be considered a modification to the EA. No other changes to the EA are needed, and the agencies may make their decisions based upon the contents of the EA and the agencies' respective statutory authorities.

We appreciate your interest in this matter.

Arthur R. Clinch

Arthur R. Clinch, Director
Department of Natural Resources and Conservation

Mark A. Simonich

Mark A. Simonich, Director
Department of Environmental Quality

Marvin Dye, Director
Department of Transportation

CENEX FRONT RANGE PIPELINE EA COMMENTS AND RESPONSES

1. **COMMENT:** It is an unacceptable impact to interrupt traffic on Stillwater County roads for one or two days. Traffic must be maintained at all times for emergency vehicles and area residents during construction.

RESPONSE: The pipeline construction operations across county roads will interrupt traffic for approximately 4 hours. All trenching and backfilling operations will take place during daylight hours. No trench will remain open during periods of non-construction and overnight. Mats, steel plating, and/or bridging timbers will be on-site and available for use as temporary bridges, if necessary. In the event of an emergency, construction equipment will be on hand during construction to immediately backfill the trench. Emergency vehicles will be allowed to cross the open trench once measures have been taken to allow safe access across the ditchline. The county sheriff and county road department will be notified 24 hours prior to commencement of construction across any county roads.

2. **COMMENT:** A 75' right-of-way amounts to a plowed strip 75' wide for 300 miles. This right-of-way is ideal for weed propagation. Long term (every year) should be spot sprayed because of weed propagation due to maintenance traffic.

RESPONSE: Treatment of noxious weeds has been documented in the environmental assessment (EA, section 1.3.10, page 1-12; and Appendix D, Noxious Weed Control Plan, Maintenance Program, page 2). Generally, following completion of the pipeline construction operations, maintenance traffic would consist of weed sprayers.

3. **COMMENT:** This dense grass can be easily ignited by one of the welders welding up the pipeline. We can see no provisions for fire fighting equipment. A bad fire can destroy thousands of acres of grass range.

RESPONSE: It is common practice for welders to carry a fire extinguisher with their welding units. Water trucks used in controlling fugitive dust will be on the pipeline right-of-way and will be available to assist in putting out fires that may result from welding sparks or any other construction operation. During periods of high to extreme fire danger on state lands, the contractor will be required, by a stipulation on the construction special use licenses, to provide fire extinguishers to construction crews. If an emergency situation exists, local fire departments will be called for assistance.

4. **COMMENT:** How many valves will you have on the pipeline that will stop or cut off the flow of crude oil to the pipeline rupture? How long will it take to shut down the pipeline system? How many barrels of crude oil would be lost and how much land would be contaminated by a major spill? What is your procedure for cleaning up a major oil spill? On land? In rivers and small streams?

RESPONSE: There will be 28 block valves installed on the pipeline. The pipeline system can be shut down in less than 10 seconds. It is not possible to calculate the potential amount of a spill without knowing the exact location and circumstances of the leak. A plan, given in Appendix B of the environmental assessment (EA) and required by federal regulations, has been developed that assures a quick response to failures.

5. **COMMENT:** We note that unpaved county roads will be opencut to a depth of six to seven feet and back-filled. Specifications say nothing about compaction. All road excavation should be compacted in 6" lifts and surfaced with gravel.

RESPONSE: The construction specifications for the project require that backfill of open cut road crossings will be thoroughly compacted in 6-inch layers to the satisfaction of the owner and officials having jurisdiction over the facility. The road surface will be returned to its original condition.

6. **COMMENT:** Much of the pipeline will be constructed in late fall and winter months. This means muddy, wet county roads as well as access roads. They will be destroyed by heavy traffic and heavy equipment. Who will maintain and rebuild these damaged county roads and bridges? Will the counties be reimbursed for the cost of repairing roads and bridges damaged by the pipeline construction traffic?

RESPONSE: No matter what time of year construction occurs, Cenex and the construction contractor will be responsible for damage to roads and bridges that may result from construction operations.

7. **COMMENT:** Who will be in charge of pipeline quality assurance, such as non-destructive testing of welds, as well as environment impact and assessment? Will there be independent on-site monitors with sufficient knowledge and authority to halt construction if warranted by environmental concerns? Will Cenex be required to provide financial assurance such as a surety or cash bond to indemnify the state and its taxpayers for failure to construct and operate the pipeline as claimed?

RESPONSE: Trigon Engineering Inc. would provide qualified environmental monitors and construction inspectors on each construction spread. The monitors will be responsible for compliance monitoring with all permit conditions and stipulations and each monitor will have the authority to halt construction if warranted because of environmental concerns or permit violations. The construction inspectors will be responsible for seeing that construction specifications are met by the contractors and will also have the authority to halt construction. Periodic on-site inspections during pipeline construction will be made by various federal, state, and local agencies, and include inspections by the U.S. Department of Transportation Office of Pipeline Safety. The state has no overall statutory authority over crude oil pipeline construction and operation, but the agencies would enforce compliance with the terms of any permits or authorizations they issue.

No surety or bond is required by state law. Cenex has Pollution Liability coverage for sudden and accidental losses in the amount of $150 million, as required by the Oil Pollution Act of 1990.

8. COMMENT: We feel that the environmental assessment as written reflects a definite conflict of interest as regards to the preparation of this assessment by Trigon. Further, the state bureaus who signed off on this assessment have little or no experience with pipeline construction, so the project should be very closely monitored.

RESPONSE: The EA was prepared by Trigon at the agencies' direction. The agencies independently reviewed the EA for compliance with the Montana Environmental Policy Act (MEPA) and its implementing rules and are responsible for its scope and content. It is common practice for agencies to rely on private consultants for particular expertise when preparing environmental reviews. It thus made sense to use Trigon, with its technical expertise and knowledge of the project, to prepare the EA at the agencies' direction.

9. COMMENT: We have a concern regarding stream crossings in the Big Coulee Creek drainage. There exists in this drainage a unique hybrid population of finescale/northern redbelly dace. Have you consulted with the Montana Department of Fish, Wildlife and Parks (MDFWP) on the best way to handle these fish?

RESPONSE: In a letter (EA, Chapter 4) from MDFWP dated February 2, 1995, the regional supervisor stated department concerns regarding the hybrid dace inhabiting Big Coulee Creek. Also, the letter stated the department's requirements of special considerations when crossing this stream. On-site inspections at the proposed crossing locations of the North and South Forks of Big Coulee Creek were conducted for the 310 permitting process by personnel from the Lower Musselshell Conservation District and MDFWP to review the proposed construction plans. The plans were approved by the conservation district and MDFWP. In the area of the proposed crossing, MDFWP also determined that no critical habitat of this species would be destroyed and that all known populations have been identified in the mainstem of Big Coulee Creek rather than higher up in the north and south fork tributaries.

10. COMMENT: What methods can you use to traverse wetlands and/or stream crossings that will minimize discharge of mud or sediments and will otherwise not harm wetlands?

RESPONSE: The methods of crossing wetlands and streams have been documented in the EA (EA, Sections 1.5.1.10 and 1.5.1.11, pages 1-22 to 1-28; and Appendix C, Montana Pollutant Discharge Elimination System (MPDES) Storm Water Erosion Control Plan, Section 3.1, pages 16 to 23).

11. COMMENT: The environmental assessment as written does not adequately consider the cumulative and secondary impacts of the proposed pipeline. The EA is inadequate because it does not address in any substantial way the effects that the pipeline would have on non-state lands and the effects of the operation of the pipeline. The granting of the state permits and leases will allow the action of the construction and operation of the pipeline. The EA should address all effects of the proposed action.

RESPONSE: The EA describes the affected environment on both state and private lands. The EA also assesses the impacts of the proposed action and alternatives for those areas of the project that would require state authorizations. The impacts and mitigative measures discussed for state lands will be the same for private lands. No cumulative impacts are expected as a result of the state actions because of the dispersed nature of the actions. No secondary impacts are expected to result from the state actions because there are no proposals before the agencies for which approvals would be stimulated by the state authorizations needed for the Cenex project.

The scope of MEPA review on a project is limited by the amount of state involvement in the project, the extent of the state's jurisdiction, and the amount of discretion the state has in exercising its jurisdictional power. The state has no general regulatory authority over construction and operation of a crude oil pipeline of this size. Pipelines under 17 inches in diameter are exempt from regulation under the Montana Major Facility Siting Act. The state's jurisdiction is limited to state-owned lands and navigable waters, highway crossings, water rights, possible air quality considerations during construction, and certain water quality permits and approvals. Ninety-four percent of the land over which the pipeline would run is private, so the state's involvement is limited. Furthermore, recent action by Cenex has eliminated the authority of the Montana Department of Transportation (MDT) over any segment of the pipeline and has very substantially reduced the authority of the Department of Natural Resources and Conservation (DNRC). On August 23, Cenex filed a tariff with the Montana Public Service Commission under 69-13-103, MCA. The effect of this filing is to give Cenex authority to lay pipeline across navigable streams and highways without the permission of DNRC or MDT. In addition, this filing gives Cenex the power to condemn right-of-way using the power of eminent domain. This power extends to state trust lands.

12. COMMENT: The EA does not show the location of the proposed centerline.

RESPONSE: A general location map has been provided in the EA (Figure 1.1, page 1-13). Land plats that indicate the location of the proposed route in detail have been provided to private landowners from whom easements have been acquired. The proposed locations of the pipeline on lands under state jurisdiction are provided on the maps in Appendix A of the EA.

13. COMMENT: The EA presents no analysis of the likelihood of an oil spillage along the right of way, the environmental consequences of a spill, and mitigating factors that could reduce the possible impacts. There is no history of the **failure rate of similar crude oil pipelines.**

RESPONSE: Oil spillage from the proposed pipeline is unlikely due to a number of factors relating to the design, construction, operation, and maintenance of the pipeline. Federal regulations aimed specifically at preventing oil spills (49 CFR Part 195) impose stringent design, operation, and maintenance requirements on oil pipelines which must be followed. These requirements include: use of piping and valves that are rated for pressures in excess of operating pressures; inspection of 10% of the welds, although Cenex will inspect 100% of the welds; hydrostatic testing to 125% of the maximum operating pressure; block valves at river crossings; corrosion protection system; overpressure safety devices; minimum burial requirements, which Cenex will exceed; periodic visual inspection and testing of various pipeline components; and twice monthly aerial inspections. Cenex will periodically conduct voluntary line inspections with an electro-magnetic instrument passed inside the pipe to detect any decreases in wall thickness. Additionally, heavier wall thickness pipe with an additional corrosion coating will be used for river and stream crossings.

The pipeline will be included in a regional "one call" system that provides notification of any digging or drilling in the pipeline's vicinity by outside parties. This reduces the possibility of accidental damage. A written excavation damage prevention program will be in place by late September as required by federal regulations.

An oil spill plan, summarized in Appendix B, is required by federal regulations and must be approved before the pipeline is operational. The plan describes Cenex's system for responding to spills, including catastrophic events, natural disasters and bombing. It includes pipeline emergency shutdown procedures, detailed listings of equipment and personnel resources, location of public drinking water intakes and known environmentally sensitive areas, and specifics about Cenex's response training and drill program.

Pressure in the pipeline will be controlled and continuously monitored by a computerized system that is continuously manned by a pipeline dispatcher. The control/monitoring system is also equipped with audible and visual alarms and automatic high and low pressure shut down. In the event of a leak, immediate knowledge would be revealed due to the continuous monitoring. Pumps would be immediately shutdown and block valves on either side of the leak would automatically close, minimizing spill volume. The response system would be immediately activated to contain and collect any spilled oil and mitigate any impacts to the environment.

In 1991, Cenex built a 255-mile petroleum products pipeline between Minot and Fargo, North Dakota. In 1984, Cenex built the **Santa Rita pipeline to transport crude oil from Canada to Santa Rita. Parallel lines were built in 1992 and 1994. None of these lines has experienced a leak.**

14. **COMMENT: The EA deals only with the construction phase and not with the operation of the proposed action.**

RESPONSE: Operations and maintenance of the pipeline are discussed in the EA (Section 1.5.3, pages 1-32 to 1-33).

15. COMMENT: Information in the EA is not sufficient to evaluate the environmental effects of the several stream crossings that will be required. The proposed method of construction, the wet trench method, is the least desirable approach to cross streams. Without site specific mitigation, the effects of each stream crossing may be significant.

RESPONSE: The construction techniques and mitigative measures proposed for crossing streams have been described in the EA (EA, Section 1.5.1.11, pages 1-25 to 1-28, and Section 3.4.2, pages 3-6 to 3-7; and Appendix C, MPDES Storm Water Erosion Control Plan, Section 3.1, pages 21 to 23).

Most stream crossings would be completed within 24 hours. The crossings of Belt Creek, and the Marias, Teton, and Musselshell rivers would take 2 to 3 days each. The Missouri River would not be disturbed because the pipeline would be installed by directional drilling under its bed. Crossings would be constructed during late season low flow periods.

The wet-ditch method would cause temporary short-term increases in suspended sediments during activities within the waterway. For most crossings, trenching, pipe laying, and backfilling each take about 2 hours. Maximum turbidity levels occur during trenching and backfilling. Equipment will be removed from the waterway during periods of inactivity on wider streams that take more than a day to cross. When construction ceases, any increases in turbidity generally taper almost immediately to near pre-construction background levels.

The counties have the authority, under the Montana Natural Streambed and Land Preservation Act, to permit crossings of streams by private entities. These "310 permits" are issued after a site visit by a committee composed of representatives of the county conservation district, MDFWP, and the landowner. The permits carry any mitigations stipulated by the committee and are approved by all three members of the committee. Cenex has received all of the needed 310 permits from the counties. Wet ditching was approved by all but Judith Basin County which stipulated dry ditching. MDFWP, under the 310 process, must indicate whether construction in a stream will cause a significant increase in turbidity. MDFWP indicated that the only stream crossings involving wet ditching with a potential for significant impacts from increased turbidity are on the Marias, Teton, and Musselshell rivers. 3A authorizations to temporarily exceed water quality standards are therefore being required for these three crossings. These authorizations will carry the condition that wet ditching not be used on these streams.

16. COMMENT: The bias of this document begins early by statements regarding the level of new disturbance. In fact 44 percent of the project's construction will result in new disturbance.

RESPONSE: The proposed pipeline and fiber optic cable would be approximately 302 miles in length, of which approximately 168 miles would parallel existing disturbance corridors, including corridors for pipelines, railroads, powerlines, and roadways. The remaining 134 miles would go cross country. The maximum surface disturbance anticipated is about 2,746 acres. Of the total, about 1,528 acres (56%) of the disturbance would be adjacent to existing disturbance corridors. Of the remaining 1,218 acres (44%) of pipeline disturbance, 636 acres (23%) have been disturbed by cultivation. The remaining 582 acres (21%) are rangeland.

17. COMMENT: It is unclear if the state land board has approved rights-of-way across State of Montana sections. The document should indicate if that has occurred, and what effects the easements have on the sections.

RESPONSE: The Board of Land Commissioners has not approved right-of-way easements to cross school trust lands or navigable rivers. The Board will not consider the easement applications until the environmental review process is finished. If easements are granted, the impacts described in the EA would occur, lessees would be compensated for crop or forage losses, and the school trust would be paid for the easements. It should be noted, however, that Cenex no longer needs to obtain easements to cross the Missouri and Teton rivers (please see the response to comment 11).

18. COMMENT: The EA includes no information on the environmental protection requirements that will be part of the pipeline permit. The EA must indicate what financial surety or bond arrangement the state has to ensure Montanans do not have to pay for adverse environmental and economic impacts associated with a pipeline leak or chemical spill.

RESPONSE: The state has no jurisdiction over the construction of crude oil pipelines. Federal regulations at 49 CFR Part 195, Transportation of Hazardous Liquids by Pipeline, set minimum design, construction, and operation standards for crude oil pipelines. The materials used would be manufactured in accordance with American Petroleum Institute specifications recognized by federal regulations. No surety or bond is required by state law. Cenex has Pollution Liability coverage for sudden and accidental losses in the amount of $150 million, as required by the Oil Pollution Act of 1990.

19. COMMENT: The action of crossing streams is directly related to the various state actions that are necessary for the pipeline construction and stream crossings to occur. The consequences of the stream crossings to the human environment are cumulative effects and must be evaluated and disclosed in the MEPA documents that support the state actions.

RESPONSE: Consequences from construction across streams are not cumulative. The impacts are short term. Each crossing is an individual action for which construction practices and mitigative measures will be implemented as discussed in the EA (EA, Section 1.5.1.11, pages 1-25 to 1-28, and Section 3.4.2, pages 3-6 to 3-7; and Appendix C, MPDES Storm Water Erosion Control Plan, Section 3.1, pages 21 to 23). Please see responses to comments 11 and 15.

20. COMMENT: The EA cursorily mentions the possibility of increased exploration and developments in Northern Montana as a result of the construction of this pipeline. This indicates a need to prepare an analysis of cumulative impacts which, but for the new pipeline allowed by your actions, would not be caused. No discussion details what those connected actions' impacts would be or when they are likely to occur.

RESPONSE: Under the uniform MEPA rules, which have been adopted by the Department of Environmental Quality (DEQ), DNRC, and MDT, only future actions under environmental study or review or under consideration for permitting by state agencies must be reviewed for cumulative impacts. The possibility of future exploration and development is speculative, and no plans have been proposed to state agencies for review or permitting. Therefore, no such secondary impacts are expected as a result of the state authorizations for the Cenex project. No cumulative impacts are expected as a result of the state actions because of the dispersed nature of the actions.

21. COMMENT: When referring to block valve siting near streams, there should be clarification of just what is meant by water crossings of greater than 100 feet in width high water to high water.

RESPONSE: Federal regulations at 49 CFR Part 195, Transportation of Hazardous Liquids by Pipeline, requires that valves be installed on both sides of water crossings that are 100 feet or more between the evidence of high water marks.

22. COMMENT: The block valves should also be considered where high water from spring runoff of floods show that there is a potential to reach the 100 foot high water marks.

RESPONSE: Block valves will be installed at stream crossings where evidence indicates the potential for high water from spring runoff reaching the 100-foot width.

23. COMMENT: The block valves should be considered where the crossing of smaller streams show that there is potential for rapid and high water with a potential of boulders and debris hitting the pipeline.

RESPONSE: The pipe will be buried well below the streambeds (a minimum of 4 feet is required by federal regulations) to prevent damage to the pipe from material transported by the flow of water.

24. COMMENT: It should be more clear what "other locations as dictated by good engineering practices" means with regard to installing additional block valves.

RESPONSE: In the judgment of Cenex, block valves will be installed at locations not specifically required by federal regulations. For instance, block valves are planned for both sides at Deadman's Basin Supply Canal, even though the proposed crossing is less than 100 feet wide. This was chiefly recommended because the water from this canal flows into Deadman's Basin and is used for irrigation, and the water eventually flows back into the Musselshell River. Valves will also be located along the pipeline to limit the length of pipe between valves. Cenex plans to install a total of 28 block valves.

25. COMMENT: It appears that the Cenex route will parallel Altamont's certificated gas pipeline route and, in some locations, actually occupy the same ground. Altamont's certificated route may be compromised in areas of steep slopes, rugged terrain or rock where considerable blasting and grading may be necessary.

RESPONSE: Cenex has agreed to provide Altamont with information needed to identify routing concerns for the two projects.

26. COMMENT: Cascade County has issued a permit for the Cenex Corp. to proceed with their project through the town of Fife. The pipeline will run through Railroad Ave. This abandoned street is adjoined to our property. Vegetation will be destroyed during construction. There is the possibility of an accident occurring causing seepage of oil into the water supply of our well. An earthquake could cause destruction. Is there going to be a pump station outside my front door?

RESPONSE: The county's issuing a permit for Cenex to build on county property is not within the control of the state agencies, and the commentor should discuss his concerns with county officials. Damage to resources, such as vegetation, would be repaired by Cenex following construction. A spill response plan, required by federal law and summarized in Appendix B of the EA, would be in place before the pipeline becomes operational. This plan would contain measures for responding to spills, including those caused by natural disasters. Cenex carries $150 million in liability coverage, as required by federal law, to cover the costs of spill clean up. The pump stations will be in Santa Rita and near Raynesford.

27. COMMENT: Permits and rights of way have already been applied for or received for many elements of the pipeline, thereby prejudicing design, mitigation and pipeline routing. Construction of certain elements -- such as some canal crossings and the Laurel section -- has already occurred, thereby making it difficult for the state to select an alternative that is not Cenex's.

RESPONSE: Eight of the ten MDT utility occupancy permits were obtained for highway crossings, of which two were used near Laurel, before the present environmental review began. However, because Cenex has filed a tariff under 69-13-103, MCA, it does not need authorization from MDT for any of the highway crossings. An MPDES Stormwater Construction General Permit Authorization was obtained for the same limited area to construct about 3 miles of pipeline before spring planting and irrigation began. No other permits, easements, or authorizations have been issued by the state. The agencies do not feel that this limits their further options.

28. COMMENT: The range of alternatives is pretty slim. They include no alternative routes that might have reduced

impacts on the environment. The only way to adequately formulate alternatives is to prepare an EIS.

RESPONSE: Under the MEPA rules, an alternative to a proposed action must substantially accomplish the objectives of the proposed action while reducing or eliminating an impact on a resource at issue. Alternatives are issue driven and are not developed without a reason. Alternatives can be formulated in an EA as well as in an EIS (environmental impact statement). No resources under the agencies' jurisdiction are expected to be impacted to the extent that additional alternatives need be developed.

29. COMMENT: A detailed and complete list of fish and wildlife species potentially affected should be disclosed. The EA should demonstrate that it listened to the wildlife agencies consulted, such as the U.S. Fish and Wildlife Service's concerns for piping plovers and ferrets, and for waters feeding two wildlife refuges. The EA doesn't indicate whether mitigation for stream crossings comports with MDFWP's recommendations for the hybrid dace. The EA should include some examination of the effect the pipeline could have on wildlife and fish benefiting from the conservation reserve program.

RESPONSE: Because Cenex received assurances from MDFWP that no wildlife habitat along the pipeline route would be significantly impacted, the agencies saw no need for an exhaustive listing of species potentially inhabiting the approximately 162 acres of pipeline disturbance that would be under their control. Major species are listed. Piping plovers are known to occur at Alkali Lake and ferrets are restricted to attempted reintroduction areas in north-central Montana. Neither of these places would be approached by the pipeline. Materials and construction methods are designed to minimize the chances of an oil spill. If a spill were to occur in waters feeding the wildlife refuges, Cenex's spill contingency plan would be activated and clean up would begin promptly (please see the response to comment 13). MDFWP's concerns for the hybrid dace were handled by Cenex (please see the response to comment 9). About 15 acres of Conservation Reserve Program (CRP) land under the jurisdiction of DNRC would be disturbed by pipeline construction. The disturbed areas would be promptly reclaimed.

30. COMMENT: The Front Range Pipeline exceeds the threshold of a major action significantly affecting the environment and an EA is inadequate unless it clearly demonstrates that mitigation does indeed ensure the impacts fall below the significance threshold that requires an EIS.

RESPONSE: Mitigation measures are described in Chapter 3 and Appendix C of the EA. Approximately 162 acres of land in 34 parcels under DNRC's control would be disturbed by construction.

Much of this land has been disturbed by pipeline and power line construction before. Reclamation of the disturbance is expected to be prompt and not problematical. Ten highway crossings would be made. Since the pipeline would be bored under the roadway, no disturbance to highway surfaces is anticipated. MPDES stormwater permit authorizations and 3A authorizations to temporarily exceed water quality standards issued by DEQ would contain measures to minimize or prevent impacts to stream water quality. Sixty acre-feet of water would be taken from the Marias River and 30 acre-feet from the Yellowstone for hydrostatic testing of the pipeline. The water rights of existing users would not be adversely affected. Because the construction activities are of limited extent and duration, the agencies do not anticipate significant impacts and believe that an EIS is not necessary.

31. COMMENT: The EA should detail the specific monitoring of resources impacts that the state will do.

RESPONSE: If personnel are available, spot checks may be made to ensure compliance with MPDES permit stipulations and the success of revegetation and weed control. Please see the response to comment 7.

32. COMMENT: The EA lacks adequate analysis on specific environmental impacts.

RESPONSE: The EA assesses the impacts of the proposed action and alternatives in Chapter 3 for those areas of the project that would require state authorizations. The impacts and mitigative measures discussed for state lands will be the same for private lands.

33. COMMENT: The EA lacks adequate analysis on a response plan.

RESPONSE: To comply with federal law, Cenex must complete its response plan and have it approved by the U.S. Department of Transportation Office of Pipeline Safety before the pipeline could become operational. Please see the response to comment 13.

34. COMMENT: The EA lacks adequate analysis on social and economic effects.

RESPONSE: The social and economic effects of the pipeline on lands outside state jurisdiction are beyond the scope of this EA. Few workers are likely to be on these state lands at any one time, and the economic benefit derived by these workers from working on the pipeline on the lands involved would likely be minimal.

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DEPARTMENT OF STATE LANDS

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July 14, 1995

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- Cenex must obtain easements from the Board of Land Commissioners for crossing school trust lands and state-designated navigable rivers.

- Cenex must obtain temporary water rights for hydrostatic pipeline testing from the Water Rights Bureau's regional offices in Havre and Billings.

- Cenex must obtain a letter of permission from the Water Projects Bureau to bore and install the pipeline and cable under the Deadman's Canal.

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Department of Transportation (MDT)

- Cenex must obtain utility occupancy permits for crossing state and federal highways from district offices in Great Falls and Billings.

MEPA requires that actions of state government must receive environmental review before they can be taken. This review may take the form of an environmental assessment (EA) or an environmental impact statement (EIS). The attached EA was prepared under the supervision of the three agencies listed above. Representatives of these agencies have reviewed the EA and found that it complies with the requirements of MEPA.

Having reviewed the EA, the agencies have made a preliminary determination that the state actions involved are unlikely to result in significant environmental impacts, therefore there is no need to prepare an EIS. This conclusion is based on the following:

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Construction activities would be of short duration with prompt reclamation of disturbed areas, including reseeding and weed control, with follow-up treatment if necessary.

Pipeline materials, construction methods, and testing and inspection measures would meet or exceed the safety standards required by the U.S. Department of Transportation (49 CFR, Part 195 - Transportation of Hazardous Liquids by Pipeline).

Much of the pipeline's route would coincide with other utility corridors and their previous disturbance. Future pipelines under review pursuant to the Montana Major Facility Siting Act would generally be at some distance from the Front Range Pipeline.

Water rights of existing water users would not be adversely affected.

Impacts to water quality would be temporary and of short duration.

Members of the public may submit written comments on the EA. Comments must be specific and should address the adequacy of the EA in assessing issues, new information not considered that may affect the analysis, and any clarifications that may be necessary. Comments should be mailed to the following address and be received or postmarked on or before August 7, 1995:

Department of Natural Resources and Conservation
Trust Land Management Division
PO Box 201601
Helena MT 59620-1601.

If substantive comments are received, the EA may be revised before agency decisions are made. If no substantive comments are received, the agencies may make their decisions based upon the contents of the EA and the agencies' respective statutory authorities.

We appreciate your interest in this matter.

M. Jeff Hagener (acting for)
Arthur R. Clinch, Director
Department of Natural Resources and Conservation

Mark A. Simonich
Mark Simonich, Director
Department of Environmental Quality

for
Marvin Dye, Director
Department of Transportation

FRONT RANGE PIPELINE

CENEX, INC.

STATE OF MONTANA ENVIRONMENTAL ASSESSMENT

Prepared By:

Montana Department of State Lands
Montana Department of Health and Environmental Sciences
Montana Department of Natural Resources and Conservation
and
Montana Department of Transportation

Helena, Montana

JULY 1995

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CHAPTER 1

PROPOSED ACTION AND ALTERNATIVES

1.1 INTRODUCTION

Cenex, Inc. (Cenex) proposes to construct the Front Range Pipeline and a fiber optic cable on lands administered or owned by the State of Montana, as well as private lands. A major portion of the pipeline and fiber optic cable would follow existing pipeline (approximately 86 miles), railroad (approximately 9 miles), transmission line (approximately 57 miles), and highway corridors (approximately 2 miles of highways and 14 miles of county roads). Some new disturbance would result from the proposed construction activities.

Construction of the Front Range Pipeline Project is anticipated to commence in late July 1995, with completion in December 1995. The pipeline would be constructed in three spreads. Spreads 1 and 2 are anticipated to begin in late July 1995, and Spread 3 in late August 1995. Spread 1 would originate at the north end of the proposed route near Cut Bank and proceed south approximately 105 miles to the Missouri River. Spread 2 would originate at the south edge of the Missouri River and proceed south approximately 130 miles to a point near Shawmut, MT. Spread 3 would originate near Shawmut and proceed south approximately 67 miles to the terminus at the Laurel Refinery.

The approximately 302-mile, 16-inch pipeline would transport crude oil from the existing Cenex Santa Rita Terminal near Cut Bank to the Cenex Refinery and other Billings/Laurel refineries. The initial construction would consist of the pipeline and fiber optic cable, an originating pump station at the Santa Rita Terminal, and a mid-point pump station near the center of the line. There would be provision for two future pump stations near each quarter point of the line. Additionally, a possible future pipeline connection may be installed north of Great Falls to provide crude oil to Montana Refining in Great Falls.

The Front Range Pipeline would be a common carrier line and would carry two streams or grades of crude oil to the terminus in Yellowstone County. These streams would be a light sour crude and a medium sour crude. The initial capacity of the Front Range Pipeline would be 65,000 barrels per day. The line would carry initial volumes of approximately 40,000 barrels per day. Initially, the pipeline would carry an estimated 5,000 to 10,000 barrels of light sour crude and 30,000 to 35,000 barrels of medium sour crude per day.

The light sour crude would contain production from northern Montana (Glacier, Toole, Liberty and Pondera Counties) along with production of similar quality from southern Alberta. The stream would have an API gravity of 30° to 35° and a sulfur content by weight of 1% to 1.5%. [The American Petroleum Institute (API) is a petroleum industry group that prepares industry accepted standards for materials, construction practices, and operation procedures for the construction of pipeline systems. API standards are recognized in 49 CFR and are referenced throughout this document.] The initial volumes of this stream are anticipated to be 5,000 to 10,000 barrels per day and represent all of the production of this grade of crude. The proposed pipeline would have the capacity to move additional volumes of light sour crude should the production in this area increase.

The medium sour stream would contain, primarily, Bow River production from southern Alberta along with small volumes of heavier Montana production produced in Blaine County. This stream would have an API gravity of 23° to 28° and a sulfur content by weight of 2.5% to 3.0%. The volumes of medium sour crude that would be available to move in the proposed pipeline would be determined by the capacity of the Canadian pipelines that currently supply Bow River crude. Currently, Canadian pipelines supply approximately 67,000 barrels per day of medium sour crude. These pipelines are expanding their delivery capability to an estimated 135,000 barrels per day and the additional capacity is forecasted to be in place by the end of 1995. Initially, the Front Range Pipeline is anticipated to carry approximately 30,000 to 35,000 barrels per day of this stream.

Potential shippers have advised that they anticipate Bow River crude would replace the Big Horn Basin Wyoming Sour in the southern Montana refineries. Current assays made available by the Cenex refinery in Laurel show that Big Horn Basin Wyoming Sour has a API gravity of 22.3° and a sulfur content by weight of 3.15%. Bow River crude has an API gravity of 24.8° and a sulfur content by weight of 2.57%.

The Front Range Pipeline would be owned and operated by Cenex, a Minnesota Corporation whose principal office is located in Laurel, Montana. The pipeline would be designed, constructed, and operated in accordance with 49 CFR 195, "Transportation of Hazardous Liquids by Pipeline". This regulation sets minimum safety standards for the design requirements for pipelines and is aimed at preventing pipeline rupture. Such standards include construction, materials, welding, inspection (including radiographic examination of welds), external corrosion protection, required depth of burial of the pipe, road and railroad crossings, and hydrostatic testing; as well as operations and maintenance of the pipeline system. The proposed pipeline would meet or exceed all of these requirements. The design, construction, and operating procedures for the pipeline would produce a minimal risk of rupture, leak, or spill.

The fiber optic cable would be constructed and owned by Cenex, and maintained and operated by TRI Touch America, Inc. (TRI). In the future, the fiber optic cable would be extended from the Laurel Refinery to Billings to provide a communications link between Cenex business offices in each location, as well as fulfill TRI client demands in the Billings area. As currently being considered, the future fiber optic line would be owned, constructed, operated, and maintained by TRI. The proposed line would be an independent project and not associated with the proposed Front Range Pipeline.

The proposed pipeline route was chosen based on topographical, environmental, and Right-of-Way (ROW) acquisition constraints. The proposed pipeline and fiber optic cable route would cross thirty-four parcels of state lands of Montana, ten federal-aid system highways, and two navigable waters of the State of Montana (Missouri and Teton rivers).

Currently, approximately 98.5 percent of the proposed ROW has been acquired from private landowners.

Construction of the Front Range Pipeline would create approximately 400 temporary jobs and approximately ten permanent positions in Montana. It is anticipated that greater than 50 percent of the laborers for construction activities would be local hires in Montana.

This Montana Environmental Protection Act (MEPA) document, Environmental Assessment (EA), describes the pre-project environment and assesses the impacts of the proposed actions and alternatives for those areas of the proposed Front Range Pipeline that would require State of Montana authorizations. The direct and indirect, site-specific effects of construction, operation, and maintenance of the proposed pipeline and ancillary facilities will be assessed herein. The impacts will be analyzed for long- and short-term consequences, and mitigative measures will be presented to ameliorate any adverse effects.

1.2 PURPOSE AND NEED

The proposed action would provide for the construction, maintenance and operation of the Front Range Pipeline and ancillary facilities for the purpose of providing sufficient pipeline capacity to transport crude oil produced in northern Montana and in southern Alberta, Canada to refineries in the Laurel/Billings, Montana area. Existing pipelines from northern Montana to the Laurel/Billings area have been operating at full capacity. Crude oil production in the Big Horn Basin in northern Wyoming, which has been a historic source of crude oil for southern Montana refineries, is declining at a rate that has prompted the need for additional crude oil to be acquired in southern Alberta and transported to Laurel/Billings. Current forecasts by the State of Wyoming anticipate a state-wide decline in crude oil production of 9% to 11% in 1995, with the decline rate accelerating in future years.

The proposed fiber optic cable would be an essential link for data communications critical to the operations of the pipeline by providing Cenex with pipeline monitoring and control capabilities. The cable would provide the ability to remotely monitor the pipeline and control valve stations, pumps, and other equipment. Cenex would utilize a portion of the fiber optic cable for the operation of the pipeline system and TRI would utilize the remainder of the cable for business purposes as determined by their client demands.

1.3 AUTHORIZING ACTIONS AND RELATIONSHIP TO STATUTES AND REGULATIONS

As set forth under the Montana Environmental Policy Act (Title 75-1-101, et seq., MCA), administrative rules for the Montana Department of State Lands (MDSL), Montana Department of Natural Resources and Conservation (MDNRC), Montana Department of Health and Environmental Sciences (MDHES), and the Montana Department of Transportation (MDT) provide that these agencies conduct an environmental review when making decisions which may have an impact on the environment. The environmental review process also applies to "...a project or activity involving the issuance of state permits, licenses, certifications, and other entitlements for use or permission to act which may impact the environment". The MDSL requires the preparation of a EA to determine if the proposed action would have significant adverse effects on the environment. If the EA indicates that significant adverse impacts would occur, which could not be mitigated below the level of significant, the agency must prepare an Environmental Impact Statement (EIS).

Cenex's proposed actions would require the decisions of various state agencies to :

1. approve the applications and issue the permits;
2. approve the applications with modifications and issue the permits; or
3. deny the various applications.

Prior to commencement of construction activities affecting areas requiring State of Montana authorizations, Cenex must receive state authorization for ROW across state lands, highway crossings, and water rights, and for environmental impacts to air and water

quality, to wildlife, and to cultural resources. Federal and state permits and approvals necessary for the construction, operation, maintenance, and abandonment of Cenex's proposed actions are listed in Table 1.1.

Effective July 1, 1995, the MDSL and the MDHES will be dissolved because of a state reorganization. Functions of the MDSL, MDHES, and the MDNRC will be divided among the MDNRC and the new Montana Department of Environmental Quality.

1.3.1 U.S. Army Corps of Engineers

The permitting and regulatory authority for the discharge of dredged or fill materials related to construction of pipelines in wetlands and other "waters of the United States" is administered by the U.S. Army Corps of Engineers (COE) pursuant to Section 404 of the federal Clean Water Act (33 CFR 323.1 and 330) and the Environmental Protection Agency (EPA) pursuant to Section 404(b)(1) guidelines (40 CFR 230). Pipeline construction across COE jurisdictional areas would be authorized under a nationwide permit, with exception of the Marias River, where an individual permit would be required for the proposed crossing.

Section 401 water quality certification from the state is required for nationwide permits authorizing actions that may result in any discharge into waters of the United States. State water quality certification must be obtained by the COE from the MDHES prior to authorization of nationwide or individual permits by the COE.

1.3.2 U.S. Fish and Wildlife Service

Under the Federal Endangered Species Act of 1973, special protection is provided to any species and its habitat that is listed as endangered or threatened. An informal Section 7

Table 1.1: Major Federal, State and Local Permits, Approvals and Authorizing Actions Necessary for Construction, Operation, Maintenance and Abandonment of the Front Range Pipeline Project. Cenex, Inc. Front Range Pipeline, 1995.

Issuing Agency	Permit Name	Nature of Permit	Authority
US Army Corps of Engineers	Section 404 Permit	Controls discharge of dredged or fill materials in wetlands and other waters of the U.S.	Clean Water Act (33 CFR 323.1, 330)
US Fish & Wildlife Service	Informal Section 7 consultation	Identifies any species and its habitat listed as endangered or threatened that may be impacted by the project.	Federal Endangered Species Act of 1973
Board of Land Commissioners	ROW Easement/Land Use License	Authorizes construction activities on state owned lands in Montana	Title 77, MCA
Montana Department of Health and Environmental Sciences	3A Authorization	Authorizes short-term exemptions from certain surface water quality standards	Montana Water Quality Act (75-5-101)
Montana Department of Health and Environmental Sciences	MPDES Permit	Permits construction activities that would result in the discharge of storm water to waters of the state	Montana Water Quality Act (75-5-401 et seq., MCA)
Montana Department of Natural Resources and Conservation	Floodplain Development Permit	Allows construction activities within a designated 100-year floodplain	Montana Floodplain and Floodway Management Act (76-5-401 through 406, MCA)
Water Rights Bureau	Water Right Permit	Appropriates surface waters for beneficial uses	Montana Water Use Act (85-2-301, 302, 306, 316, 402 and 424, MCA)
Montana Department of Transportation	Utility Occupancy Permit	Permits easements and encroachments on or across state highway ROW	Title 69-4-101 and 60-4-402, MCA
Montana Department of Fish, Wildlife and Parks	Pre-construction inspection of aquatic areas.	Administers programs to conserve and protect threatened or endangered species. Identify areas requiring a 3A Authorization.	Title 87, MCA
State Historic Preservation Office	Mitigation Plan	Determines impacts on historic properties on state-owned lands	Montana Antiquities Act (22-3-421 through 442, MCA)
County Conservation Districts	310 Permit	Permits construction activities in or near perennial streams on public and private lands	Montana Natural Streambed and Land Preservation Act (75-7-101 et seq., MCA).
County Weed Control Districts	Noxious weed management program	Provides containment, suppression, and eradication of noxious weeds	Title 7 (7-22-2101-2153, MCA)

consultation was conducted with the U.S. Fish and Wildlife Service (USFWS), and no species of concern were identified in the project area (see letters, Chapter 4).

1.3.3 Montana Department of State Lands

1.3.3.1 Surface Management Bureau

The MDSL Board of Land Commissioners may grant an easement for ROW across any portion of state lands, including the beds of navigable waterways. Permits, licenses or easements for construction activities on state-owned lands are authorized under Title 77, MCA. The Right-of-Way Easement on State Lands grants a permanent ROW easement for the life of the project. A Land Use License must be authorized for temporary land-use during construction. Applications for ROW easements and land-use licenses were submitted to MDSL for thirty-four state land parcels in May 1995.

The Land Use License or Easement on Navigable Waters permits the construction on state lands below the low water mark of navigable streams as determined by the MDSL. For the proposed action, the MDSL has determined that the proposed crossings of the Teton and Missouri rivers fall under MDSL jurisdiction as navigable streams. Permit applications for ROW easements and land-use licenses were submitted to the MDSL for review and authorization in May 1995.

1.3.4 Montana Department of Health and Environmental Sciences

The Montana Water Quality Act (75-5-101) permits the MDHES to authorize short-term exemptions, 3A Authorization, from certain surface water quality standards initiated by short-term construction activities which may have short-term impacts on water quality. At the request of representatives from Montana Department of Fish, Wildlife and Parks (MDFWP), 3A Authorizations have been submitted for the Marias, Teton and Musselshell rivers.

The MDHES is authorized under the Montana Water Quality Act (75-5-401 et seq., MCA) to permit proposed construction activities that would result in the discharge of storm water to waters of the state. Application for a Montana Pollutant Discharge Elimination System (MPDES) Permit and a Storm Water Erosion Control Plan were submitted to and approved by the MDHES for the proposed project in March 1995.

1.3.5 Montana Department of Natural Resources and Conservation

1.3.5.1 Floodplain Management Section

Construction activities within a designated 100-year floodplain require a Floodplain Development Permit, pursuant to the Montana Floodplain and Floodway Management Act (76-5-401 through 406, MCA). The permit is issued by the local floodplain administrator or from the MDNRC.

Two waterways along the proposed pipeline route, the Teton and Musselshell rivers, have been designated within a 100-year floodplain. An application for a Floodplain Development Permit for the Teton River was submitted to the Teton County Planning Board in March 1995, with subsequent approval on May 12, 1995. An application for a Floodplain Development Permit for the Musselshell River was submitted to the Central Montana Health District in March 1995, with subsequent approval on April 13, 1995.

1.3.5.2 Water Rights Bureau

State waters of Montana may be appropriated for “beneficial uses”, which include industrial activities. To appropriate surface waters for beneficial uses, a Water Right Permit from the MDNRC Water Rights Bureau is required, pursuant to the Montana Water Rights Act (85-2-301, et seq., MCA). Applications for Water Right Permits were received in January 1995 at Water Resources Regional Offices located in Havre and in Billings for the purpose of

diverting water from the Marias and Yellowstone rivers for use in hydrostatic testing the proposed pipeline following installation.

1.3.5.3 State Water Project Bureau

Deadman's Canal is owned by the State and is managed by the MDNRC State Water Project Bureau. A Letter of Permission from the MDNRC is required to bore and install the pipeline and cable under the canal. The Letter of Permission is pending.

1.3.6 Montana Department of Transportation

The MDT is responsible for permitting encroachments on or across state highway ROW, including all Interstate highways and all primary roads, pursuant to Title 69-4-101 and Title 60-4-402, MCA. Applications for Utility Occupancy Permits have been submitted to the MDT for approval for each of the ten proposed highway crossings. Permits have been issued by the MDT for eight of these proposed highway crossings as of May 1, 1995.

1.3.7 Montana Department of Fish, Wildlife and Parks

Under Title 87, MCA, the MDFWP is required to administer programs that conserve and protect threatened or endangered species. The MDFWP has been consulted and has indicated no wildlife concerns for the proposed project area. Fishery concerns have been identified pertaining to a hybrid dace located in the Musselshell watershed and to temporary turbidity increases (see letters, Chapter4).

As a requirement for final approval of the "310 Permits" issued by each County Conservation District, MDFWP personnel conducted on-site inspections at each perennial creek and river crossing to review proposed construction plans. Following the on-site inspections, the plans were "approved" or "approved with modification" by the MDFWP and the conservation district. In addition, MDFWP personnel make the determination whether a

3A Authorization is required by the MDHES, Water Quality Division for short-term exemptions to state water quality standards.

1.3.8 State Historic Preservation Office

The MDSL has agency rules that require consultation with the State Historic Preservation Office (SHPO) to determine whether an applicant's request for a permit for a proposed action would impact historic properties on state-owned lands within the project area (Montana Antiquities Act, 22-3-421 through 442, MCA). If the proposed action would affect historic properties, the MDSL must establish a mitigation plan for sites that are considered eligible for listing or listed on the National Register of Historic Places (NRHP), and must determine a method for proceeding with the proposed action.

Pursuant to the Federal Clean Water Act (33 CFR 323), and under the National Historic Preservation Act and the implementing regulations of 36 CFR 800, permitting of the proposed wetland and stream crossings by the COE requires consultation with the SHPO to assess the potential effects of the proposed action on historic properties associated with COE jurisdictional areas. Approval by SHPO is pending.

1.3.9 County Conservation Districts

Each County Conservation District requires "310 Permits" for construction activities in or near perennial streams on public and private lands pursuant to the Montana Natural Streambed and Land Preservation Act (75-7-101 et seq., MCA). All counties within the project area, except Yellowstone County, determined that this is a project for their respective counties. "310 Permits" are issued for each perennial stream crossing by each county conservation district in consultation with MDFWP personnel. All "310 Permits" have been approved and issued by all conservation districts "as is" or "with modifications". No perennial streams are traversed by the proposed pipeline route in Yellowstone County.

1.3.10 County Weed Control Districts

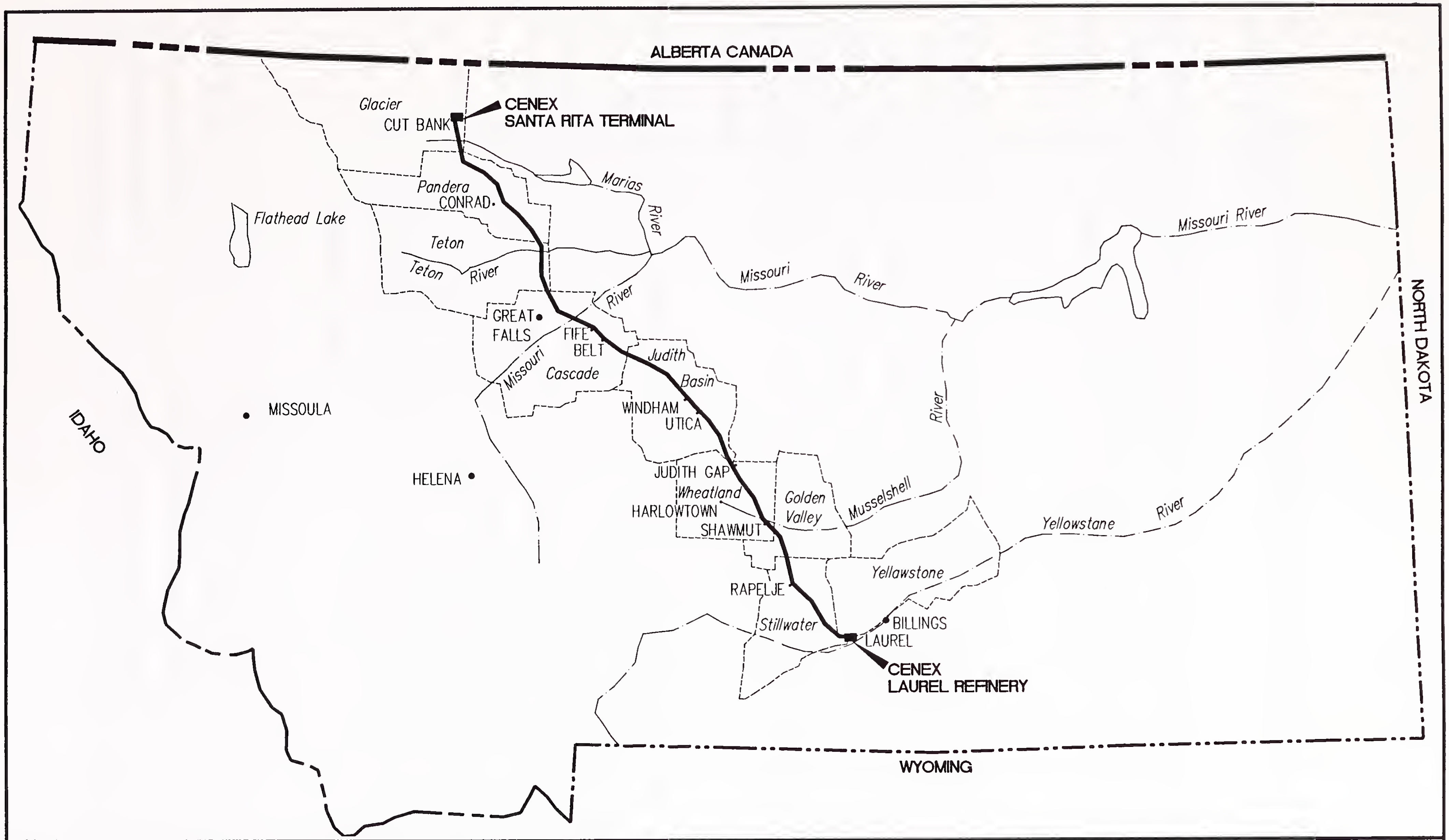
District weed boards were established under Title 7 (7-22-2101 through 2153, MCA) to provide weed management for each Montana county through planning and implementation of a coordinated program for the containment, suppression, and possible eradication of noxious weeds. Noxious weed management plans were submitted for review to all district weed boards associated with the proposed pipeline route in February 1995. Plans were approved by all district weed boards by March 1995 (Appendix D).

1.4 GENERAL LOCATION

Cenex's proposed actions and alternatives would be constructed from the existing Cenex Santa Rita Terminal near Cut Bank to the Cenex Refinery in Laurel, Montana. The general project area would span nine counties in Montana: Glacier, Pondera, Teton, Cascade, Judith Basin, Wheatland, Golden Valley, Stillwater, and Yellowstone counties (Figure 1.1).

1.5 PROPOSED ACTIONS

Cenex proposes the construction of approximately 302 miles of pipeline and fiber optic cable, block valves, and two pump stations. The pipeline would be constructed of new 16-inch OD steel pipe, manufactured in accordance with API specification 5LX60, with a yield strength of 60,000 pounds per square inch (psi), and generally with a 0.281 inch wall thickness, with some pipe of 0.344 inch wall thickness. All pipe would be coated to industry standards with fusion bond epoxy for corrosion protection and the 0.344 inch pipe would also be coated with Protegol. Protegol is a solvent-free two-part polyurethane/tar coating compound that provides a durable coating and corrosion protection for steel pipes which are forced through the ground underneath railway embankments and roadways. Where



CLIENT

CENEX Pipeline Company
FRONT RANGE PIPELINE

DESCRIPTION

PROPOSED 16" CRUDE OIL PIPELINE

SCALE: NONE
REVISION DATE: 6/26/95
DRAWN BY: R. CLIFT
DATE DRAWN: 11/14/94
FILE NAME: A697M001
REV: A

PREPARED BY
TRIGON ENGINEERING INC
DENVER COLORADO

Figure 1.1: General Location Map

flotation is a possibility, the pipe would be coated with concrete or weighted with concrete weights or anchors.

The pipeline would be protected from corrosion by a Cathodic Protection system. Test leads would be installed on the pipe at all cased crossings (railroad), at crossings of other pipelines, and at selected locations along the line where test readings are deemed necessary.

The pipeline would be buried in a trench approximately five feet deep and would have a minimum cover of 42 inches throughout. In areas where bedrock is exposed at the surface or near the ground surface, the pipeline would be buried in bedrock a minimum of 18 inches. For stream crossings, the pipeline would have a minimum cover of 48 inches, with exception of the Missouri River crossing, where the pipeline would be installed by directional drilling under the river. The maximum allowable pressure for the pipeline would be 1,480 psig.

Block valves would be American National Standard Institute (ANSI) 600# full port gate valves. Block valves would be manufactured in accordance with API 6D, "Specification for Pipeline Valves". The valves would be designed for an operating pressure of 1,480 psig. The valves would be manufactured to accommodate the passage of internal inspection devices. The valves may be installed above ground or buried and located within the 50-foot permanent ROW. Valves would be located on each side of all water crossings of greater than 100 feet in width (high water to high water), on each side of each pump station, at the Santa Rita Terminal, at the Cenex Refinery, and at other locations as dictated by good engineering practice.

The initial phase of pipeline operation would have a capacity of 65,000 barrels per day and would require two pump stations. One station would be located within the boundaries of the existing Santa Rita Terminal. The other station would be located near Raynesford at the approximate mid-point of the line. Two future pump stations would be constructed at the approximate quarter-points of the line which would increase the pipeline capacity to

95,000 barrels per day. Each station would have three pumps; one 2,000 horsepower (hp), one 1,250 hp, and one 700 hp. These pumps would be electric motor driven, horizontal split case, centrifugal pumps. All of the pump station equipment would be housed in a single building at each site.

Electrical power for the pump stations would be supplied by new service connections from existing transmission lines. The service would be provided by Glacier Electric Cooperative at the originating station at the Santa Rita Terminal and by Montana Power Company at the other stations.

The fiber optic cable would be a single cable, approximately 1/2 inch in diameter, containing 36 fibers. The cable would be buried in the same trench as the pipeline with a minimum cover of 42 inches of cover, with exception of the Missouri River crossing, where the cable would span the river using existing transmission towers. Generally, a conduit system would be utilized in borings and in areas that increased protection is needed for the fiber cable. The conduit consists of High Density Polyethylene, smooth wall, 1.9 inch OD, 1.5 inch ID tube.

A 50-foot-wide permanent ROW would be necessary and an additional 25-foot-wide temporary ROW would be needed for construction. Temporary Use Areas (TUA) would be needed at various crossing locations to provide additional work space and staging areas for equipment, pipe welding and preparation, and stockpiling materials and spoil for construction.

Various points along the proposed pipeline corridor would be accessed from existing paved and unpaved roadways, and from private entries as agreed to with landowners.

Cenex has made application for ROW easements to cross thirty-four parcels of land and two navigable waters of the State of Montana under the jurisdiction of the MDSL. Cenex has requested that the state grant a 50-foot-wide permanent easement for each parcel, with an additional 25-foot temporary ROW for construction. In addition, Cenex has made

application for utility permits for the ten proposed roadway crossings under the jurisdiction of the MDT. Applications for water rights permits for temporary water use from the Marias and Yellowstone rivers have been submitted to the MDNRC. Each state-land parcel, navigable water crossing, roadway crossing, and water diversion point has been designated with a site number for the purpose of this document and is listed in Table 1.2. The location of the pipeline relative to each site is illustrated on maps included in Appendix A.

1.5.1 General Pipeline Construction

In general, pipeline construction would be carried out in the following sequence:

1. ROW crews clear and prepare the work area ahead of ditching crews;
2. ditching crews excavate the ditch ahead of pipe crews;
3. pipe crews install the pipe and fiber optic cable ahead of clean-up crews; and,
4. clean-up crews backfill the ditch and clean up the area.

The sequence in which the line is constructed at any one time would be determined by the construction contractor. Generally, pipeline construction crews and equipment would be concentrated in any given area about two to five days. Construction at special crossing areas or in areas of more rugged terrain would require additional time.

1.5.1.1 Clearing and Grading

Clearing of the ROW would be limited to the smallest area possible to provide safe and efficient work areas for all phases of pipeline construction. Shrubs, brush and small trees would be cut to ground level and cleared from the ROW using appropriate equipment such as brush-hogs and chain-saws. Large trees would be felled and cleared to the edge of the

Table 1.2: List of State-owned and administered lands. Cenex,Inc. Front Range Pipeline, 1995.

SITE #	STATE LEASE #	LEGAL DESCRIPTION	LAND USE	ACRES DISTURBED
1	4754	Sec. 36, T34N, R6W	Agriculture	0.45
2	210	Sec. 16, T33N, R5W	Agriculture	4.50
3	6588	Sec. 2, T31N, R5W	Rangeland	4.50
4	3326	Sec. 29, T28N, R2W	Agriculture/Rangeland	1.50
5	4452	Sec. 27, T26N, R1W	Agriculture	3.60
6	8337	Sec. 27, T23N, R2E	Agriculture	3.60
7	1439 & 7027	Sec. 32, T22N, R3E	Agriculture	10.65
8	1129 & 1437	Sec. 5, T21N, R3E	Rangeland	3.00
9	7137	Sec. 1, T17N, R8E	CRP/Rangeland	9.60
10	3207	Sec. 16, T17N, R9E	CRP/Rangeland	4.95
11	4863 & 4864	Sec. 35, T17N, R10E, Sec. 1, T16N, R10E	Rangeland	16.80
12	4863	Sec. 6, T16N,, R11E	Rangeland	5.25
13	6414 & 4864	Sec. 15, 16, T16N, R11E	Rangeland	3.45
14	3182	Sec. 22, 23, T16N, R11E	Rangeland	7.05
15	2407 & 8856	Sec. 24, 25, T15N, R12E	Rangeland	6.60
16	1797	Sec. 16, T13N, R14E	Rangeland	0.60
17	5626	Sec. 2, T12N, R14E	Agriculture/Rangeland	2.70
18	371	Sec. 13, T12N, R14E	Rangeland	5.25
19	387	Sec. 19, 30, T12N, R15E	Agriculture	4.20
20	4562	Sec. 36, T10N, R15E	Rangeland	5.11*
21	6345	Sec. 16, T9N, R16E	Range land	11.59*
22	7372	Sec. 16, T8N, R17E	Rangeland	6.59*
23	4181 & 4182	Sec. 11, 14, T7N, R17E	Rangeland	11.93*
24	2878	Sec. 36, T7N, R17E	Rangeland	2.85
25	3743	Sec. 8, T6N, R18E	Rangeland	10.50
26	1165 & 3734	Sec. 16, T6N, R18E	Rangeland	5.25
27	2296	Sec. 36, T1S, R23E	Agriculture	9.90
28		Sec. 21, T33N, R5W	U.S. Highway 2	0.00
29		Sec. 34, T30N, R4W, Sec. 3 T29N, R4W	MT Highway 44	0.00
30		Sec. 11, 12, T28N, R3W	MT Highway 91 Frontage, L-81007	0.00
31		Sec. 12, T28N, R3W	U.S. Interstate 15	0.00
32		Sec. 19, T21N, R4E	U.S. Highway 87 North	0.00
33		Sec. 1, T17N, R8E	U.S. Highway 87	0.00
34		Sec. 24, T7N, R17E	U.S. Highway 12	0.00
35		Sec. 36, T10N, R15E, Sec. 31, T10N, R16E	U.S. Highway 191 North	0.00
36		Sec. 7,18, T2S, R24E	MT Highway 10, L-81015	0.00
37		Sec. 18, T2S, R24E	U.S. Interstate 90	0.00
38		Sec. 35, T32N, R5W	Marias River	0.72
39		Sec.. 13, T25N, R1W	Teton River	0.21
40		Sec. 26, T21N, R4E	Missouri River	0.00

* These values are estimates.

ROW. Cut trees and shrubs would be disposed of in accordance with landowner specifications.

Grading would be required along the trenchline in all upland areas and in areas of irregular topography to create level work areas, and to provide adequate ROW access and safe working conditions for workers and equipment operation. Typically, grading is accomplished using dozers or maintainers. Grading would not be allowed in wetland areas. Downslope and sideslope perimeter erosion and sediment control measures would be installed during grading (Appendix C).

In graded areas, topsoil would be removed to a maximum depth of 12 inches and stockpiled on the non-working side of the ROW where possible. The subsoil (spoils) would be stockpiled adjacent to, but separate from the topsoil.

Gravel/stone ramps would be installed at access points to public roads, as needed, to prevent or minimize the tracking of mud, dirt, sediment or similar materials onto the roadway. Deposits that have been tracked by vehicles or have been transported off the ROW by wind or storm water would be promptly cleaned up.

1.5.1.2 Trenching

Several procedures would be utilized during trenching operations to reduce erosion and sediment transport and to protect valuable topsoil resources (Appendix C). In areas that do not require grading, topsoil segregation would be accomplished during trenching operations using a double-ditching procedure. Topsoil would be removed to a maximum depth of 12 inches and stockpiled on the non-working side of the ROW where possible. The trench spoils would be stockpiled adjacent to, but separate from the topsoil. Trenching in upland areas is typically accomplished using a trenching machine or trackhoe. If necessary, blasting may be used where rock in the ditchline cannot be removed using standard methods. A trackhoe or dragline is generally used for wetland and stream crossings.

Trench-breakers would be constructed in the open trench in areas of sloping terrain to reduce sediment transport and to control runoff from channeling. Trench-breakers usually consist of sandbags, earth-filled sacks, or sprayed foam barriers. If trench dewatering becomes necessary, water would be discharged to the ground where adequate vegetative cover exists to prevent channeling and sediment transport, or into temporary dewatering structures constructed of silt fence and straw bales.

1.5.1.3 Pipe and Fiber Optic Cable Installation

Pipe would be hauled to the ROW and strung adjacent to the open trench in a manner that would preserve the condition of the pipe and coating materials. Bending equipment would be used to create pipe bends that coincide with changes in grade or direction of the trench. The pipe would then be welded together in compliance with API Standard codes. Welding rods would not be discarded on the ROW or in the trench, and would be removed from the ROW to an approved disposal facility. All welds would be 100% x-rayed for compliance in accordance with API 1104, “Welding of Pipelines and Related Facilities”. Coating crews would clean and coat all field joints to specifications. The lowering crew would check the trench for proper dimensions and for any foreign objects; including welding rods, trash and other debris. The lowering crew would lower the pipe and cable into the trench.

1.5.1.4 Backfilling

Backfilling procedures would incorporate processes to protect topsoil and to prevent erosion of backfill material. Topsoil and trench spoils would remain segregated during backfilling. Under no circumstances would the topsoil be used for padding or backfill. After the pipe has been installed, spoils would be used to cover the pipe. In rocky areas, padding would be used to cover and protect the pipeline from rocks. Padding material would consist of original trench subsoil that has been screened of rock or of imported rock-free soil. Imported padding material would consist of cleaned sand from a local commercial source. After padding has been completed, trench spoils would be backfilled. When

backfilling is completed, excess spoils from the trench would be spread evenly across the ROW.

1.5.1.5 Hydrostatic Testing

After trench backfilling has been completed, the pipeline would be hydrostatically tested to ensure pipeline integrity. The testing procedure would consist of the diversion of water sufficient to fill segments of the pipe to be tested and pressuring the pipe 1.25 times the maximum operating pressure (1,850 psig) for eight hours.

Water for the hydrostatic test would be diverted from three sources. Water rights permits obtained from the MDNRC would provide for diversions of water from the Marias River at the proposed pipeline crossing (SW4 SW4 SE4, Section 35, T32N, R5W) and from the Yellowstone River near the Cenex Refinery at Laurel (SW4, Section 15, T2S, R24E). Approximately sixty acre-feet of water may be needed from the Marias River for testing that portion of the pipeline constructed in the Missouri River watershed. Approximately thirty acre-feet of water would be diverted from the Yellowstone River for testing that portion of the pipeline constructed within the Yellowstone River watershed. Water from the Marias and Yellowstone rivers would be pumped at a rate of 1,500 gallons per minute directly into the pipeline. If needed, additional water would be obtained from Lake Frances, located near Valier, through an agreement with the Pondera County Canal and Reservoir Company. Water from Lake Frances would be hauled to an input point along the pipeline.

Following completion of the testing, the test water would be transferred to other portions of the line for subsequent testing or discharged to the ground through a dewatering structure constructed of straw bales and silt fence. Prior to discharge, the test water would tested for contaminants in accordance with state and federal requirements. Test water would be discharged within the source watershed. The rate of discharge would be controlled to prevent flooding or erosion. The testing procedure does not contaminate the test water although small amounts of soil and other suspended solids may be entrained.

After the hydrostatic testing has been completed and prior to placing the pipeline in-service, foam drying pigs would be run through the line to remove residual water and any foreign materials.

Hydrostatic testing may be necessary under winter conditions. If winter conditions do exist during testing, the tested above-ground sections would be protected and heated. The below-ground sections would have water entrained short periods of time and typically would not freeze at the buried depth of the pipe. No anti-freeze additives would be used to protect the test water from freezing.

1.5.1.6 Unpaved Road Crossings

Trenches (approximately 36 inches wide) would be cut across all unpaved roads to a minimum depth of 56 inches, and road crossings would normally be completed within one to two days. No additional TUA's would be needed to cross unpaved roads. Construction across roads would generally be completed in advance of the mainline pipeline construction activities. The pipe used in the road crossing would be connected to the pipeline system as the pipeline approaches from either side. A conduit for the fiber optic cable would be installed adjacent to the pipe which would allow easy installation of the cable as the mainline construction approaches each road crossing. Interruption of the flow of traffic would be limited to one to two days to excavate the trench, install the pipe, and backfill the trench.

1.5.1.7 Paved Road Crossings

For paved road crossings, the ROW and an additional TUA would be used on each side of the road. This TUA would be used primarily for stockpiling soil, materials, and boring equipment, and for the construction of a bore pit. A borehole would be bored horizontally from the pit, under the road, and at minimum depths specified by the highway department, generally four to five feet.

1.5.1.8 Canal Crossings

Canal crossings would be accomplished by open cutting or by boring. The ROW on each side of the canal would be used for stockpiling soil and materials; and where boring is implemented, for set-up of the boring equipment and construction of a bore pit. The borehole would be bored horizontally from the pit, under the canal, and at minimum depths to maintain the integrity of the canal and the borehole, generally four to five feet.

Construction under canals would generally be completed in advance of the mainline pipeline construction activities. The pipe used in the canal crossing would be connected to the pipeline system as the pipeline approaches from either side. A conduit for the fiber optic cable would be installed adjacent to the pipe which would allow easy installation of the cable as the mainline construction approaches each canal crossing.

1.5.1.9 Other Pipeline Crossings

The proposed pipeline would cross other crude oil, natural gas, and water pipelines at approximately 65 locations. The proposed line would be installed under the existing pipelines with a minimum clearance of one foot between the lines.

1.5.1.10 Wetland Crossings

All wetland crossings would be constructed in accordance with specific state and federal regulations. A detailed description of construction procedures for wetland crossings is included in the MPDES Sediment and Erosion Control Plan (Appendix C). Crossing procedures for construction of a pipeline across wetland areas are determined by the type of wetland encountered, the length of the crossing, and the level of soil saturation. The method of crossing would be determined by field inspection prior to construction, using best professional judgment.

Seasonal Wetlands

A standard method used for pipeline construction across seasonal wetlands would be implemented for wetland areas where the soil is dry and firm and capable of supporting heavy construction equipment. Typically the best time to use this method is during the late summer and fall months where temperatures are relatively high and rainfall is generally low.

Clearing and Grading: All equipment would be cleaned and inspected prior to entering a wetland and no leaking equipment would be allowed. Sediment barriers (silt fencing, straw bales, and/or diversion terraces) would be installed across the pipeline ROW on either side of a wetland area, approximately 50 feet upland to the wetland boundary. Until actual wetland construction begins, a 50-foot vegetative buffer would be maintained upland to the wetland boundary. Construction and vehicular access would be strictly limited across wetland areas. The width of ROW disturbance would be minimized. Woody vegetation, such as trees and shrubs, would be cut to ground level and cuttings would be removed from the wetland areas. Non-woody vegetation would be cut and removed using standard construction methods. No grading would occur within the wetland boundary. Stream-crossing construction specifications would be utilized for streams encountered within wetland areas.

Trenching: Wetland topsoil (sod) would be removed to a depth of 12 inches and for the width of the trenchline and stockpiled in the adjacent wetland within the ROW. Ditching would be accomplished using a backhoe or dragline. The trench would be dug to a depth sufficient to cover the pipe with a minimum of 42 inches of backfill. Trench spoils (subsoil) would be sidecast into the adjacent wetland, segregated from the topsoil.

Pipe Installation: Pipe sufficient to cross a wetland would be made-up (strung, welded, and x-rayed) on the adjacent upland ROW. The made-up section(s) of pipe and cable would be carried and lowered into the trench using side-booms or similar equipment. The pipe would

be weighted by means of a concrete-coating or concrete weights to prevent flotation, as needed.

Backfilling: Well-compacted trench breakers would be installed at all wetland boundaries. Breakers would minimize upland drainage along the pipeline into the wetland. The stockpiled subsoil would be returned the ditch, followed by replacement of the topsoil. Although pipeline padding is generally unnecessary in wetlands, the need for padding would be determined on a site specific basis by the chief inspector and an environmental monitor.

Reclamation: Excess spoil materials would be removed from the wetland and spread on the adjacent upland ROW. Contours would be restored to original preconstruction elevations. All construction materials and supplies, as well as woody materials from clearing and grading activities would be removed from the wetland area. Generally, revegetation of the wetland ROW would not be necessary. Typically, the wetland area would revegetate naturally within two to three years after construction is completed. Final clean-up would be conducted as weather conditions permit.

Typical Wetlands

In wetland areas where soil moisture conditions do not allow construction using seasonal wetland construction procedures, modifications to seasonal wetland construction procedures would be implemented. Soil conditions in these areas are typically saturated within 18 inches of the ground surface and cannot support the weight of construction equipment without disturbing wetland soils. In general, the modifications would further reduce construction impacts to wetland areas.

Modifications: Wooden mats or boards would be placed in wetland areas to reduce impacts to wetland vegetation and soils. All construction equipment and vehicles would be restricted to these mats. Topsoiling and ditching would be accomplished using a backhoe or dragline, operating from mats. The made-up section(s) of pipe and cable would be

installed by carrying or dragging the pipe and cable into place (Figure 7 and 8, Appendix C). To carry and lower the pipe into the trench, side-booms or similar equipment would be operated from mats. To drag the pipe into the trench, the previously made-up pipe would be floated into place using a push/pull method. All construction mats, and other materials and supplies, as well as woody materials from clearing and grading activities would be removed from the wetland area.

1.5.1.11 Streams and River Crossings

All stream and river crossings would be constructed in accordance with specific state and federal regulations. A detailed description of construction procedures for stream and river crossings is included in the MPDES Sediment and Erosion Control Plan (Appendix C). Construction procedures for crossings of streams and rivers have been designed based on the depth, width, and flow of the water bodies. These procedures have been specifically developed to minimize the impacts of construction activities on water bodies by allowing for quicker completion of trench excavation, pipe installation, and backfilling operations while controlling excessive erosion and sedimentation. The pipeline would be installed under the Missouri River by directional drilling and construction activities would have no impact on this water body.

Only those vehicles and construction equipment necessary for construction of the creek or river crossing would be allowed to enter the water. All other equipment and vehicles would be required to either cross at a pre-constructed crossing (county road or farm bridges) or at a temporary bridge or flume crossings constructed specifically for pipeline construction. All crossing and construction activities in the water would be limited to those necessary for the completion of the stream crossing in a timely fashion.

Wet-Ditch Construction Method

A wet-ditch construction method would be utilized for most stream crossings (Figure 9, Appendix C). As required for "310 Permit" approval, representatives from each County Conservation District and MDFWP personnel conducted on-site inspections of all perennial creek and river crossings to review construction methods for each crossing. Crossing methods were approved "as is" or "with modifications". All county conservation districts and MDFWP personnel approved the wet-ditch construction method, with exception of Judith Basin County.

Clearing and Grading: Sediment barriers would be installed across the pipeline ROW on either side of a streambank, approximately 50 feet upland to the waterway. A 50-foot vegetative buffer would be maintained until actual stream-crossing construction begins, except where a crossing for vehicles and construction equipment is placed. The degree of grading and the width of ROW disturbance would be minimized along the streambank. Streambank topsoil would be removed and stockpiled behind an earthen berm in the adjacent upland area within the ROW.

Access: In most cases, the stream crossings are narrow. Flume pipe culverts or temporary bridges would be installed across the streams to provide access to the work areas on both sides of the stream. This would also minimize streambank degradation and erosion, and sediment flow into the waterway. Culverts would be stabilized using clean gravel. Sand bags would be used to channel the upstream flow through the culvert(s) and to stabilize the trailing edges of the culvert(s). Low-flow streams or streams with solid rock or gravel channels, such as the Marias River, may be crossed without the installation of flumed access points. All equipment would be cleaned and inspected prior to entering a stream, and no leaking equipment would be allowed within the waterway. Refueling of equipment would not be conducted within 100 feet of any streambank.

Trenching: Trenching would be accomplished using a backhoe which would only enter the stream as necessary to complete the work. The trench would be dug to a depth sufficient

to cover the pipe with a minimum of 48 inches of backfill. Trench spoil would be removed from the streambed, and stockpiled and segregated from the streambank topsoil in the adjacent upland area behind an earthen berm lined with silt fence.

For the Marias River crossing, a temporary diversion barrier composed of streambed materials would be constructed upstream of the proposed ditchline and would extend from the north bank approximately one-half the width of the streambed (Figure 11, Appendix C). Trench spoils removed from the ditch behind this barrier would be stockpiled in the streambed adjacent to and downstream of the barrier. The steep slope adjacent to the north bank of the river does not provide adequate space to stockpile streambed materials in an upland area.

Pipe Installation: Pipe sufficient to cross the stream would be made-up (strung, welded, and x-rayed) on the adjacent upland ROW. The made-up section(s) of pipe and the cable would be carried and lowered into the trench using side-booms or similar equipment. The pipe would be weighted by means of a concrete-coating or concrete weights to prevent flotation, as needed.

Backfilling: Backfilling is generally accomplished using a backhoe. Once the pipe is placed in the trench, the spoil material would be used to backfill the trench. Sand, gravel, or dirt would be used as padding where rock is present in the trench.

Reclamation: Construction equipment and debris would be removed from the streambed and banks. Streambeds and banks would be restored to preconstruction contours where possible. Streambank topsoil would be replaced. Streambanks would be seeded and mulched. Jute matting or other suitable erosion control materials would be utilized to anchor streambank areas with unstable soils. Riprap or similar type material would be installed along streambanks subject to stream-flow erosion and generally where streambanks have a slope steeper than 2:1. Riprap would be placed from the streambed to the top of the streambank. The riprap would be of sufficient size to prevent transport by stream flow.

Dry-Ditch Construction Method

The dry-ditch construction method would follow the same steps as the wet-ditch method, except the stream flow would be diverted through culverts to bypass the ditchline (Figure12, Appendix C). As a modification to the "310 Permit", this construction method was approved by the Judith Basin County Conservation District and MDFWP personnel for all perennial stream crossings in Judith Basin County.

1.5.1.12 Construction in Rocky Areas

Some of the areas to be affected by installation of the pipeline have shallow soil underlain with bedrock. Ditching would require the use of a rock saw or ripping. Every effort would be made to avoid blasting; however, blasting may be used where the rock in the ditch-line cannot be removed using a trenching machine or trackhoe. A blasting program would be designed by explosive experts.

Rimrock areas would require ripping. Rimrock features are formed by outcrops of sandstone and shale that are resistant to weathering and erosion. Blasting would not be used for removal of rimrock.

1.5.1.13 Rehabilitation and Reclamation

Rehabilitation and reclamation measures would be initiated following backfilling of the ditch and clean-up of the area. On state land, rehabilitation and reclamation would be carried out according to state policy, stipulations, and regulations. Agreements between Cenex and private landowners would dictate rehabilitation and reclamation of private land.

In general, rehabilitation and reclamation measures consist of:

1. recontouring steep slopes, side hill cuts, and areas with problem soils;
2. installing water bars and diversion terraces;
3. replacement of topsoil across the disturbed surfaces;
4. disking soil compacted areas; and,
5. revegetating disturbed areas.

Following backfilling of the trench, the area would be restored to as near the natural grade as feasible. However, a temporary ditchline berm approximately eight inches high on center would be left until reseeding is begun. At that time, any of the berm that has not settled into the ditch would be contoured into the surface to natural grade. Once recontouring has been completed, graded areas of the ROW would require ripping or disking to relieve compaction. This would be done prior to replacement of topsoil across the disturbed surface. Following topsoil replacement, the entire ROW would be disked to relieve any topsoil compaction.

After final grading and prior to seeding, permanent interceptor channels (waterbars) would be constructed to stabilize upstream or upslope areas.

After reclamation has been completed, a weed-free seed mix approved by the district weed boards would be applied to the ROW and TUA's. The contents of these seed mixes would vary with the terrain but would remain standard for that type of habitat throughout the entire length of the pipeline. Standard mixes have been developed for native rangelands, dry pasturelands, irrigated pasturelands, and salty bottomland rangelands. Reseeding would take place in the next seeding season, or as specified by the entity with jurisdiction. Additional information is provided in the Weed Control Plan (Appendix D).

With the exception of saline or highly erosive soils, most disturbed acreage should be reclaimed in one to two years following reseeding. Other surface disturbances that remain after reclamation and reseeding would generally be limited to areas associated with surface facilities, such as the block valves and pump stations.

Revegetated areas would be inspected and surveyed approximately one year after seeding. The surveys would determine whether vegetative cover is greater than 40 percent and if soil erosion is being controled. If revegetation does not meet this criteria, the area would be re-prepared and reseeded. Monitoring of the reclaimed ROW would continue for three years following construction to ensure that reclamation and revegtation is successful.

1.5.1.14 Waste Disposal

In the case of a fuel spill on upland grounds, absorbent diapers and socks would be deployed in an attempt to absorb any contaminants remaining on the surface. Contaminated soil would be removed and taken to a certified soil farm. The soil would be replaced by clean fill dirt. Trucks and equipment likely to leak during non-working times, would be required to park with absorbent matting underneath. A detailed definition of clean-up procedures for spills in upland areas can be found in the Contingency Plan (Appendix B). Hazardous wastes (welding rods) would not be discarded on the ground or disposed of in the trench. All welding rods would be collected and disposed of at a permitted disposal site.

In the event that hazardous wastes are uncovered during trench excavation, construction would be halted, the proper authorities would be contacted, and the site would be mitigated according to federal and state regulations.

Best management practices would be utilized by the contractor during construction and would provide for regular disposal of garbage, rubbish, construction wastes, and sanitary wastes at approved sites. Contracts with local disposal authorities would be obtained as necessary.

1.5.2 Temporary Use Areas

Additional construction areas would be needed at various crossing locations. Temporary use areas would be required as staging areas for special crossings, i.e., road, railroad, and stream crossings. Disturbance within these TUA's would vary from brush-hogging surface vegetation, to clearing and grading areas for safe equipment operation, to excavating larger trenches or "bell holes", or to stockpiling materials and spoils.

1.5.2.1 Paved Road Crossings

Each paved road crossing would be made by horizontal boring beneath the roadway at minimum depths specified by the MDT. An area of approximately 200 by 200 feet on both sides of each highway crossing would be required to complete the boring operations. The majority of this area would be used to stockpile soil and construction materials. A bore pit (approximately 25 by 60 to 100 feet) would be excavated at each TUA.

1.5.2.2 Railroad Crossings

Each railroad crossing would be made by horizontal boring beneath the roadway at minimum depths specified by the rail companies. An area of approximately 200 by 200 feet on both sides of each railroad crossing would be required to complete the boring operations. The majority of this area would be used to stockpile soil and construction materials. A bore pit (approximately 25 by 60 to 100 feet) would be excavated at each TUA.

1.5.2.3 Other Pipeline and Utility Crossings

The Front Range Pipeline Project would require several crossings of pipeline and utility corridors throughout the project area. Crossings of pipelines and utility lines would entail no additional disturbance outside the proposed 75 -foot ROW.

1.5.2.4 Rough Terrain

Areas of rugged, rocky terrain have been identified along the proposed route and are predominantly associated with coulee crossings and rimrock areas. No additional TUA's would be needed for construction in these areas.

1.5.2.5 Stream Crossings

Several stream crossings have been identified along the proposed pipeline route. An area of approximately 200 by 200 feet on both sides of each crossing would be required to complete the crossing operations for the Marias, Teton, Missouri, Judith, and Musselshell rivers, as well as Belt Creek. The remaining stream crossings would not require additional TUA's. For stream crossings, the majority of the TUA's would be used to stockpile streambank topsoil, trench spoils, and construction materials.

1.5.3 Pipeline Operations and Maintenance

After construction is completed, Cenex would maintain and operate the pipeline and pump station facilities. An operations and maintenance manual would be prepared for this system in strict compliance with 49 CFR 195 requirements. The system would be operated and monitored by a Supervisory Control and Data Acquisition System (SCADA) from the Laurel Control Center. The system would transmit control signals and data via the fiber optic cable installed with the pipeline. This would allow the dispatcher to start and stop pumps, and monitor pressures and flow rates in the line .

Pipeline maintenance would include aerial inspections of the entire line every two weeks to detect any visible signs of abnormal conditions and to observe construction activities in the area of the line. Valves would be operated at six-month intervals to ensure proper operations when needed. Test readings at cathodic protection test points would be made annually and test records would be analyzed to reveal any trends in corrosion activities. Pressure controlling devices would be performance tested annually. In addition, Cenex would conduct internal inspections of the pipeline using a “smart pig” to detect anomalies in the wall thickness of the pipeline. Cenex also participates in the “one-call” system to prevent damage to the pipeline by a third party.

Cenex currently has in-place an Emergency Procedures Manual and Oil Spill Response Plan for existing pipelines and facilities (Appendix B). These plans would be modified to incorporate the Front Range Pipeline system as an extension of the Cenex pipeline system. The response plan is tested frequently by drills and exercises in accordance with federal regulations.

1.6 ALTERNATIVES

1.6.1 Alternative 1

Alternative 1 would extend approximately 302 miles from the Santa Rita Terminal near Cut Bank to the Cenex Refinery near Laurel. This route would primarily follow existing pipeline, transmission line, roadway, and railroad corridors and would minimize the area of new disturbance.

This alternative was designed to minimize the disturbance to the environment while maintaining development costs within acceptable limits. This route would allow easier accessibility to the ROW for materials and equipment. The potential outcomes of the Alternative 1 selection would be the gain of temporary and permanent employment, of

potential increased revenue to the State of Montana, of potential increased revenue to Cenex, of potential increased revenue to local communities; and of potential production of petroleum reserves. There would be short- and long-term impacts related to the project.

1.6.2 Alternative 2 - Approved with Modifications Alternative

Alternative 2 would follow the route considered in Alternative 1; however, the agencies would impose on the proposed actions various conditions, modifications, and mitigations not proposed by Cenex to ensure that impacts to resources of the State of Montana are minimized.

1.6.3 No Action Alternative

Under the No Action Alternative, the State of Montana would deny permit applications and the proposed 302-mile Cenex Front Range Pipeline would not be constructed. No alternative route selection would eliminate state authorizing actions for the proposed pipeline. The potential outcomes of the No Action Alternative would be the loss of temporary and permanent employment, the loss of potential production of petroleum resources, the potential loss of revenue to the State of Montana, the potential loss of revenue to Cenex, and no impact to natural resources of the state.

The No Action Alternative would result in the potential loss of employment for 400 construction workers, with greater than 50 percent of the jobs lost to Montana residents. In addition, approximately 10 new permanent jobs essential for the operation and maintenance of the pipeline would be lost. The new positions would be located at various areas along the pipeline route, with the majority of them located in the Laurel area.

Exploration and drilling activity in Northern Montana is currently at a very low point and is a result of the market price of crude oil and a perceived restriction in the availability of pipeline capacity to move the production to market. The No Action Alternative would result

in no assurance to producers that adequate transportation systems are in place to move new production to market.

The No Action Alternative would eliminate potential sources of revenue for the State of Montana. Pipelines are a major source of property tax revenues to the state. In the Cut Bank area, crude oil pipelines currently operated by Cenex pay approximately $450,000 per year in property taxes. The proposed pipeline would generate an estimated $2 million per year in property taxes for the state.

A potential loss of revenue to Cenex would result from the No Action Alternative. This alternative would create a situation in which Cenex would not be able to purchase adequate crude oil feedstocks for it's Laurel refinery. Current pipeline systems offer two sources of crude oil to the refineries in southern Montana. The Glacier Pipeline moves volumes from northern Montana and southern Alberta into the Laurel/Billings area and is currently operating at capacity and has been at maximum capacity for the past three years. As a result, no additional volumes of crude from the north are available to the southern refineries. The Exxon Pipeline brings production from the Big Horn Basin in northern Wyoming into the Laurel/Billings area. In Wyoming, production rates are falling at a rate of 9% to 11% per year. As a result, there are no additional volumes available from Wyoming, and supplies are shrinking. Additionally, the No Action Alternative would result in reduced refinery runs and lower volumes of gasoline and diesel to market. This alternative would also eliminate Cenex's $71.3 million investment in transportation facilities and would eliminate any revenues that Cenex would earn on this investment.

1.7 ALTERNATIVES CONSIDERED BUT REJECTED

1.7.1 Alternative 3

Alternative 3 would follow the initial route discussed under Alternative 1, except for that portion of the route from approximately 4 miles southwest of Judith Gap to approximately one mile northwest of Shawmut. From near Judith Gap, Alternative 3 would traverse east and south approximately 33 miles to intersect with the Alternative 1 route just northwest of Shawmut. Alternative 3 was initially considered because of difficulty in obtaining an easement from a private landowner along the proposed Alternative 1 route. The easement has been obtained.

Additionally, as compared with Alternative 1, this route would lengthen the pipeline route by 1.5 miles, increase the cost of construction, increase the area of new disturbance by deviating the route from existing pipeline and transmission line corridors, and impact four additional wetlands. This alternative is no longer being considered and will not be analyzed further in this document.

1.7.2 Alternative 4

Alternative 4 follows the Alternative 1 route except for that portion extending from near Conrad to just north of Great Falls. The route for Alternative 4 was dropped from consideration because of the possibility of encountering previously impacted soils associated with the existing crude oil pipeline paralleling the proposed route. This alternative is not analyzed further in this document.

CHAPTER 2

AFFECTED ENVIRONMENT

2.1 INTRODUCTION

Resources affected by the proposed action or alternatives, or as a special concern are addressed in this chapter. There are no known Indian Reservations, paleontological resources, wilderness areas, national parks, national wildlife refuges, or wild and scenic rivers within the project area.

In April 1995, Cenex constructed the southernmost three-mile portion of the pipeline near the terminus at the Laurel refinery (hereafter referred to as the Laurel Segment). This early phase of construction was conducted in early spring to avoid or minimize impacts to wetland areas which are typically inundated during the late spring and early summer months. Two highway crossings, US Interstate 90 and Montana Highway 10, were bored and completed in association with the Laurel Segment construction. Also in April, thirteen canal crossings in Pondera County were completed by either boring or open trenching. These canal crossings were performed to minimize impacts to canals and associated wetland seeps during irrigation season, which typically begins mid-April.

2.2 LAND USE

Land use along the Front Range Pipeline ROW corridor is predominantly dry-land cropland (50%), with wheat as the main crop. The region encompassing the northern part of the pipeline route is known as the Golden Triangle, a dominant wheat growing region in the state. Some portions of the route cross Conservation Reserve Program (CRP) lands (10%), which have been farmed in the past and are now dormant. No cultivation or grazing is allowed on CRP lands. The remaining portion of the route is agricultural rangelands,

with cattle grazing being the dominant land use. These areas are typified by open, rolling hills.

Table 1.2 lists site numbers assigned to various state jurisdictional tracts addressed in this EA. Also cross referenced are state lease numbers, locations of each tract, land use information, and anticipated area of disturbance.

Sites 1, 2, 5, 6, 7, 19, and 27: These sites are currently under cultivation.

Sites 3, 8, 11 through 16, 18, and 20 through 26: These sites are currently open range and are used for livestock grazing and big game foraging.

Sites 4 and 17: Land use on these tracts is both cultivation and rangeland.

Sites 9 and 10: Portions of these tracts are CRP lands. The remaining portions are rangeland, where land use is predominantly livestock grazing.

2.3 GEOLOGY AND SOILS

Terrain crossed by the proposed pipeline route consists predominantly of nearly level to rolling high plains. Some areas along the route have been deeply incised to form locally steeper terrain associated with coulees, streams, rivers and other drainages. In some cases, steep canyon walls and rimrock features are formed by outcrops of shale and sandstone that are resistant to weathering and erosion.

The geology of the area along the proposed ROW consists of sedimentary formations of the Cretaceous and Jurassic periods where lithologies are dominantly sandstone and shale (Alt and Hyndman, 1986). Sedimentary deposits of gravel and cobble from glacial and river outwash are found across the high plains of the region.

Information obtained from the U.S. Geologic Survey, National Earthquake Information Center indicates that the project area historically has not been seismically active. Recorded information over the past 190 years shows only minor occurrences of low-magnitude earthquake activity within the area. Areas of unstable slopes where landslides or slumping may occur have not been identified along the proposed pipeline alignment.

Soils along the northern portion of the route are characterized by clays, clay loams, and loams occurring on glacial moraines, old stream and lake terraces, and dissected shale or sandstone uplands (Haigh et al, 1980). Soils along the central third of the route are predominantly loams and clays that formed in glacial deposits and outwash, and in weathered sandstones and shales (Clark et al. 1882, Hogan et al. 1967). Sandy loams and gravely sandy loams occur along creek bottoms. Soils along the southern portion of the route consist of clay and silty loams formed in weathered sandstone and shale, along with loams and silty clays underlain by clay and fine sandy loam on river terraces, low alluvial fans, and floodplains (Parker et 1980, Meshnick et al. 1972). Soils of the Lake Basin area of Stillwater County consist of deep, poorly drained clays and clay loams formed in alluvium.

Topsoil would be removed and stockpiled from the ditchline and from the areas where grading would be necessary.

Site 3: Steep rimrock features exist on the southern canyon walls of the Marias River valley. The proposed route would parallel an existing pipeline through existing rimrock disturbances. Approximately 25 feet of additional rimrock would be removed to accommodate the pipe installation and safe working conditions for construction personnel and equipment. No additional ROW or TUA would be necessary in these areas.

Site 40: The crossing of the Missouri River would be accomplished by directional drilling under the river.

All remaining state administered sites are located on predominantly nearly level high plains and rolling hills, or associated with roadway and stream crossings.

2.4 HYDROLOGY

The proposed pipeline corridor crosses two major watersheds; the Missouri River and the Yellowstone River. Prominent rivers crossed by the project include from north to south, the Marias, Teton, Missouri, Belt Creek, Judith and Musselshell rivers. Numerous wetlands, perennial and intermittent streams (coulees and creeks), and rivers would be temporarily affected by the project (MME 1995). Intermittent streams were identified from USGS topographic maps.

Groundwater would be used for directional drilling operations associated with the Missouri River crossing. Water would be pumped from an existing well, located in the center of S/2, Section 26, T21N, R4E, near the crossing point at a rate not to exceed 20 gallons/minute and not to exceed a total of 10 acre/feet/year as per MDNRC water requirements. No permit would be required. A slurry of water and bentonite would be used as drilling mud to lubricate the borehole during drilling operations.

Once the pipeline is in the ground, the pipe would be hydrostatically tested. Cenex anticipates testing the pipeline in November or December 1995. Test water would be diverted from the Marias River, to be used for the pipe constructed in the Missouri River watershed; and from the Yellowstone River to test that portion of the line that falls within the Yellowstone River watershed. Water would be pumped from the rivers and filtered to remove debris, fish and other aquatic organisms. Should winter conditions exist while hydrostatically, no anti-freeze additives would be used to protect the test water from freezing.

Following completion of the hydrostatic testing, the test water would be discharged to the ground through a dewatering structure. The water would be discharged into the watershed from which it was diverted.

Sites 1, 2, 3, 7, 9, 10, 12, 17, 24, and 27: These state land tracts are cultivated areas or rangelands. No drainages, perennial streams, or surface waters have been identified on these tracts.

Sites 4, 14, 18, 21, and 23: Wetlands were delineated on these tracts and would be impacted by the proposed actions.

Site 6: Lake Creek and an associated wetland were identified on this tract and would be impacted by the proposed actions.

Site 11: Fox Coulee, an intermittent stream, crosses this tract and would be impacted by the proposed action.

Site 16: A wetland associated with Hauck Coulee was identified on this tract; however, this area would be avoided during construction. The water flow in this coulee is intermittent.

Site 19: A wetland associated with an intermittent tributary of Mud Creek was identified on this tract; however, this area would be avoided during construction.

Sites 5, 8, 13, 15, 20, 22, 25, and 26: Intermittent unnamed drainages were located on these tracts; however, these areas would be avoided by the proposed actions. No wetlands were found associated with these drainages.

Sites 28, 29, and 32 through 36: No wetlands, perennial streams, or surface water were identified during surveys at these sites.

Sites 30, 31, and 37: Wetlands were delineated at these roadway crossings. Boring of the crossing would avoid impacts to these wetlands or roadways.

Sites 38 and 39: These sites are the proposed crossings of the Marias and Teton rivers, respectively.

Site 40: The proposed directional drilling under the Missouri River would not impact this waterway.

2.5 AIR QUALITY

Air quality in the area of the proposed pipeline is generally very good and achieves ambient air quality standards. The only major sources of air pollution in near proximity to the proposed pipeline ROW are the cities of Great Falls and Billings, and the various refineries located at Laurel. Industrial and vehicular exhaust emissions are the primary sources of air pollutants for the Great Falls and Billings areas. The area around Great Falls does not meet State Ambient Air Quality Standards for carbon monoxide (CO), while the Billings/Laurel area is above state ambient standards for CO and sulfur dioxide (SO_2) emissions. Although not considered a non-attainment area, the area around Cut Bank experiences high levels of CO and nitrous oxides (NO_X) due to emissions from the local oil and gas industry. Most of the pollution is localized near its source. The Blackfeet Indian Reservation, a Class 1 Airshed, is located at its closest point, approximately 0.5 miles from the proposed ROW. Most of the construction areas are greater than two miles away from this reservation. No other Class 1 Airsheds are located in the immediate vicinity of the project.

Current assays made available by the Cenex refinery in Laurel show that Big Horn Basin Wyoming Sour crude has an API gravity of 22.3° and a sulfur content by weight of 3.15%. Bow River crude has an API gravity of 24.8° and a sulfur content by weight of 2.57%. Both

light and medium sour streams of crude from northern Montana and southern Alberta would overall be lighter crudes with lower sulfur contents than the current Big Horn Basin crudes that are refined at the Laurel refinery.

In May 1995, Cenex and five other industries came to an agreement with the MDHES to establish a cap or maximum limit on sulfur dioxide emissions under the State Implementation Plan for the Billings/Laurel Area. The cap, established under this plan revision, would maintain the Billings/Laurel air quality in compliance with applicable ambient air quality standards. Federal average ambient air quality levels for sulfur dioxide emissions are not to exceed 0.5 ppm for a three hour period; 0.14 ppm for a 24-hour period; and 0.03 ppm annually.

No tanks or other units that would emit volatile organic compounds (VOC) are proposed for this project.

There are no air quality concerns associated with the proposed pump stations. Each station would have electrically motor driven pumps.

Sites 1, 2, and 27: Air quality pollutant concentrations at these three sites may possibly be slightly higher than the remaining 37 sites due to the proximity to the towns of Cut Bank and Laurel.

Sites 3 through 26 and 28 through 40: These sites are rural locations and have good to excellent air quality.

2.6 VEGETATION

Rangeland vegetation in the area from Cut Bank to near Valier is known as the Northern Grasslands (Payne 1973). From Valier to near Belt, the rangeland areas are characterized

as Teton River-Judith Basin Grassland (Payne 1973). Much of these grassland areas have been cultivated with wheat. Tracts of land not cultivated are covered with wheatgrasses (*Agropyron* spp.), grama grasses (*Boutelula* sp.), some sage (*Artemisia* spp.), and snowberry (*Symphoricarpus* sp.).

The rolling hills between the Little Belt and Big Snowy mountain ranges support the vegetation type of the Foothill Grasslands (Payne 1973). Much of the ROW crosses areas of cultivation with wheat as the main crop. Dominant vegetation on rangelands is again wheatgrasses and sage along with junegrass, yucca (*Yucca* sp.), and cactus (*Opuntia* sp.).

From Judith Gap to the Yellowstone Basin, the pipeline crosses the Central Grasslands and on into the Undifferentiated Stream and Lake Bottom Rangeland type. Vegetation in this area consists of similar species as previously described, with cultivation and rangeland being the two primary types of use. On the southern end, some small areas are dominated by a ponderosa pine (*Pinus ponderosa*) community.

No threatened and endangered plant species were identified in the area by the USFWS or by the MDFWP. Surveys of wetlands also revealed no sensitive plant species.

Sites 1, 2, 5, 6, 7, 19, and 27: These sites are under complete cultivation.

Sites 3, 8, 11 through 16, 18, and 20 through 26: All of these sites are rangeland.

Sites 4 and 17: These tracts of state land are partially under cultivation with the remainder in rangeland.

Sites 9 and 10: Although primarily rangeland, approximately 10% of these two tracts are former cropland, now CRP land.

2.7 WETLANDS

Along the proposed 302-mile pipeline alignment, approximately 18.8 acres of wetlands occur within the 75-foot ROW (MME 1995). Nine types of wetlands were identified along the entire proposed route (Table 2.1). Most of the wetlands identified along the proposed pipeline corridor occur primarily as fringe and floodplain wetlands along canals, streams, creeks, coulees and other drainages. Other wetlands are associated with low lying areas where annual precipitation and melting snow accumulate. In most cases, wetland vegetation is dominated by sedges (*Carex* spp.), rushes (*Juncus* spp.), and meadowgrass (*Glyceria* sp.); although cattails (*Typha latifolia*) are also common (MME 1995).

Table 2.1: Wetland Types and Acreages Along the Front Range Pipeline Corridor. Cenex,Inc. Front Range Pipeline, 1995.

Wetland Type	Size (ac)
Stream with wetland fringe	2.30
River with wetland fringe	1.29
Linear drainage/swale/coulee with wetland fringe and/or bottom	4.46
Marsh	0.40
Wet meadow	3.54
Saline wet meadow	5.74
Isolated Depression	0.05
Impoundment with defined drainage	0.54
Canal with wetland fringe	0.50

(MME 1995)

Wetland surveys for the total proposed route and alternatives were completed in May 1995 (MME 1995). As a way of assessing the quality of the wetlands, wetland evaluation forms were completed at all sites where COE data forms were completed. The evaluations rated all of the wetlands a Category II (high value) and Category III (moderate value). Three wetland sites were rated a Category IV (low value) due to the very narrow linear orientation and limited vegetative diversity of the sites. Wetlands would be effected by the proposed

action on six state-land parcels, in association with the Marias and Teton river crossings, and adjacent to three roadway crossings.

Sites 1, 2, 3, 5, 7-13, 15, 17, 20, 22, 24-29, and 32-36: No wetlands were delineated on these sites during field surveys for wetlands.

Sites 16, 19, 30, 31, and 37: Wetlands were delineated on these sites; however, the pipeline ROW would avoid any disturbance to these wetlands.

Sites 4, 6, 14, 18, 21, and 23: Field surveys have identified wetlands along the project ROW that would be affected by pipeline construction.

Sites 38, 39, and 40: No wetlands are associated with these river crossings.

2.8 WILDLIFE AND FISHERIES

2.8.1 General Wildlife and Fisheries

Wildlife species observed along the proposed pipeline ROW include mule deer (*Odocoilius hemiones*), white-tailed deer (*Odocoilius virginianus*), pronghorn antelope (*Antilocapra americana*), coyote (*Canis latrans*), red fox (*Vulpes vulpes*), ground squirrel (*Spermophilus* spp.), yellow-bellied marmot (*Marmota flaviventris*), red-tailed hawk (*Buteo jamaicensis*), ferruginous hawk (*Buteo regalis*), northern harrier (*Circus cyaneus*), golden eagle (*Aquilia chrysaetos*), western meadowlark (*Sturnella neglecta*), horned lark (*Eremophila alpestris*), red-winged blackbird (*Agelaius phoeniceus*), yellow-headed blackbird (*Xanthocephalus xanthocephelus*), pheasant (*Phasianus colchicus*), and sharp-tailed grouse (*Tympanuchus phasianellus).*

In April 1995, a raptor survey was conducted along the entire length of the proposed pipeline. Nine raptor nests were identified within 0.25 miles either side of the pipeline. Four of the nests were inactive, three were occupied by red-tailed hawks and two by ferruginous hawks. No nests would be destroyed by the proposed construction and construction activities in the areas of the nests would occur after July 15.

Fish species thought to occur in local streams and rivers include daces (*Phoxinus* spp.), chubs (*Semotilus* spp.), shiners (*Notropis* spp.), suckers (*Catostomu*s spp.), and trout (*Salmo trutta, Salvelinus fontinalis, and Oncorhynchus mykiss*).

From written consultation with the USFWS and the MDFWP, no known wildlife concerns exist along the proposed ROW, including state lands (see Chapter 4). Montana Department of Fish, Wildlife and Parks did identify concerns about impacts of construction to water turbidity and to a population of asexual, hybrid dace (*Phoxinus eos* x *Phoxinus neopaeus*) located in the Big Coulee drainage. The fish was designated as a Species of Special Concern by the state in 1985.

2.8.2 Threatened and Endangered Species

Species of special interest to MDFWP and the USFWS are as follows:

Bald Eagle	*Haliaeetus leucocephalus*
Peregrine Falcon	*Falco peregrinus*
Black-footed Ferret	*Mustela nigripes*
Piping Plover	*Charadrius melodus*

According to the USFWS, none of these species would be affected by the construction of the pipeline and no threatened and endangered species have been identified on state lands.

Site 3: Although no threatened or endangered species have been located on this site, a peregrine falcon eyre has been located in the area of the proposed ROW. The USFWS has determined that the proposed actions would not impact the eyre because of the remoteness of the eyre to the proposed ROW, and because the eyre has been inactive since 1987. No eyre was identified within a half-mile of the proposed ROW while conducting raptor surveys in the area.

2.9 CULTURAL RESOURCES

To identify potential impacts to cultural resources, a Class I Cultural Resource Inventory was conducted by GCM Services, Inc.(GCM) for the entire proposed ROW of the Front Range Pipeline (GCM 1995). This inventory identified previously recorded sites in the vicinity of the proposed pipeline corridor that have been determined to be eligible for the National Register of Historic Places (NRHP).

A Class III Cultural Resource Inventory was conducted by GCM for segments of the proposed route and alternative routes on state-owned lands and COE jurisdictional areas (GCM, 1995). Intensive pedestrian surveys were conducted on approximately 260 acres. Results of the survey identified prehistoric sites, including lithic scatters and buffalo jumps. Also identified were some historic homesteads and canals. Identified historic and prehistoric resources were evaluated as eligible for listing in the NRHP or as not eligible, with no further action required. No paleontological resources were indentified from pedestrian surveys.

On a state land tract, a site had previously been identified and recorded in 1985. Features identified include stone circles, isolated cairns, and cairn alignments. Portions of the site have been impacted from cultivation and from construction of two existing pipelines. The centerline of the proposed pipeline would be parallel and twenty-five feet east of an existing pipeline. Portions of the proposed ROW corridor would fall within previously disturbed

areas associated with the adjacent pipeline ROW, and the remainder would fall outside of any existing disturbance.

No other cultural resources were identified on state lands.

Cultural resource sites on private lands, not identified from the Class I survey, may be encountered during construction.

2.10 RECREATION AND AESTHETICS

The proposed pipeline corridor parallels the northern Rocky Mountains on the eastern plains from near the Canadian border to the south-central part of Montana. Along the route, mountain ranges such as the Flathead, Little Belt, Big Snowy, Crazy, and Beartooth mountains can be seen from the ROW. From Cut Bank to Great Falls, views of Glacier National Park, Great Bear Wilderness, Bob Marshall Wilderness and Scapegoat Wilderness can be seen. From the southern terminus near Laurel, views of the Absaroka - Beartooth Wilderness can be seen. All of the wilderness areas are located more than 40 miles from the proposed pipeline corridor. Tourism is significant in the region and primarily occurs during the months of May through September.

Recreational activities in the area of the proposed pipeline include boating, fishing, hunting, water skiing, and snow skiing. Boating associated activities occur on the impoundments created by dams on the Missouri River, outside of Great Falls. Lake Frances, located on the north end of the project near Valier, also provides opportunities for boating. Fishing occurs on the many streams and rivers that are crossed by the pipeline, including Belt Creek, and the Marias, Teton, Judith, and Musselshell rivers. Both Lake Frances located near Valier and the Missouri River at Great Falls are used for lake fishing. Hunting opportunities exist throughout the area. Much of the rangeland and cultivated areas provided habitat for white-tailed and mule deer, antelope, pheasant, and sharp-tailed

grouse which are readily hunted. Cross-country and back-country skiing takes place in many of the surrounding mountain areas. Many people alpine or downhill ski at Red Lodge Mountain in the Beartooth Range or at Showdown in the Little Belt Mountains.

Two Indian Reservations are located near the proposed pipeline corridor. Near the north end of the proposed line, the Blackfeet Reservation is located between Santa Rita and Glacier National Park and is inhabited by the Blackfeet, Kainah, and Piegan tribes. Southeast of Laurel is the Crow Reservation, home of the Crow Tribe. The Little Bighorn Battlefield National Monument is located on the Crow Reservation. Both reservations offer fishing and camping.

Sites 1 through 27: Some public recreation may occur on legally accessible parcels of state land with the state recreational use license.

2.11 TRANSPORTATION AND UTILITIES

The proposed pipeline route crosses eight railroads, three State Highways, five U.S. Highways, and two federal Interstate highways, along with approximately 140 unpaved county roads. Besides the state permitted highway crossings listed in Table 1.2, the following secondary road crossings have been permitted by the respective counties (Table 2.2). Construction standards required for crossing Primary routes would be applied to all Secondary route crossings.

Table 2.2 : Secondary Road Crossing Locations Permitted by Counties. Cenex, Inc. Front Range Pipeline, 1995.

Road No.	Legal Location	County
213	Sec. 36, T34N, R6W	Glacier
219	btwn Secs. 18 & 19, T28N, R2W	Pondera
365	Sec. 6, T26N, R1W	Pondera
379	btwn Secs. 10 & 15, T24N, R1E	Teton
225	Sec. 18, T21N, R4E	Cascade
228	Sec. 9, T20N, R5E	Cascade
331	Sec. 2, T19N, R6E	Cascade
239	Sec. 11, T14N, R13E	Judith Basin
306	btwn Secs. 4 & 5, T2N, R20E	Stillwater

The proposed pipeline route would not cross any waterways that carry or are used for commercial traffic.

Utilities identified along the route include transmission lines for telephone, electrical power, and natural gas service, water lines, and some communication cables. The pipeline would cross crude oil, natural gas, and water pipelines at approximately 65 locations. Where the line crosses another pipeline, the Montana One Call System would be used to contact owners of the pipelines to make them aware that their lines would be crossed. Calls would also be made to the pipeline operators. Most pipeline and utility operators would have a representative on-site to locate and mark the line on the ground.

CHAPTER 3

ENVIRONMENTAL CONSEQUENCES

3.1 INTRODUCTION

This chapter analyzes the environmental consequences of the proposed action. Only those elements of the environment impacted by the proposed action on state-owned and administered lands will be discussed. Alternatives are reviewed only when impacts are different between the proposed action and the alternatives. Considered but rejected alternatives will not be discussed in this chapter. Individual actions will be discussed only when impacts differ between the actions. Impacts from the proposed actions are expected to be below the level of significant following mitigation.

Environmental resources can be affected in many ways during a proposed action. The affect, or impact, would be any change or alteration in the pre-existing condition of the environment produced by the proposed action, either directly or indirectly.

Impacts to a resource can be either beneficial or adverse, and either long-term or short-term. Short-term impacts effect the environment for only a limited time period (up to five years) and the environment usually reverts rapidly to the pre-construction condition. Short-term impacts are often temporarily disruptive and obvious.

Long-term impacts are substantial, permanent alterations to the pre-existing environment. The environment would not revert to the pre-existing conditions during the lifetime of the proposed project and beyond. Long-term impacts are typically those impacts with results enduring more than five years.

For the purpose of this EA, potential impacts have been divided into three categories:

Significant - impacts which are substantial in severity and therefore should receive the greatest attention in decision-making.

Moderate - impacts which cause a degree of change that is easy to detect, but do not meet the criteria for significant.

Low - impacts which cannot be easily detected, and cause little change in the existing environment.

Two pipeline projects, Express and Altamont, are currently being reviewed by various agencies of the State of Montana. Environmental review of these projects will be performed under the Montana Major Facility Siting Act.

3.2 LAND USE

3.2.1 Summary of Impacts

Impacts on land use are anticipated to be short-term and low. Approximately 29.4 acres of state-owned and state administered lands would be disturbed by the proposed Front Range Pipeline (Table 1.2). A portion of the state-owned tracts crossed by the proposed pipeline are rangelands that have remained virtually unchanged since the first leases were issued on these lands. Based on current use, change in future land use is not anticipated. The remaining state-owned lands are under cultivation, with wheat as the main crop. Construction would cause a temporary loss of total crop yield, although overall use would remain unchanged and total impacts would be low. It is anticipated that all crop land would only be out of production for one growing season. Some CRP land is located on two tracts

of state land. Because there is no use associated with these tracts, no impacts are anticipated to these set-a-side lands.

Existing fences encountered along the proposed ROW would be temporarily disrupted during construction activities. Temporary gates would be built and maintained where the ROW crosses fence-lines to provide easy access for vehicles and construction equipment on the ROW. On some tracts, livestock might be temporarily displaced from one pasture to another where gates are left open by construction personnel. All impacts to rangeland are expected to be short-term and low.

Disturbance, whether on crop land or rangeland, would increase the potential for noxious weed introduction along the proposed ROW. Where noxious weed infestations already exist, an increased incidence of problem weeds may result from construction activities. This would minimally decrease the lands overall value for crop production and the livestock carrying capacity.

The midway pump station would be constructed near Raynesford. Approximately 2 acres of private land would be permanently disturbed in the SW4 SW4, Section 19, T18N, R8E, of Cascade County. The impacts to present land use would be low and long-term. A second pump station would be constructed at the Santa Rita Terminal on pre-disturbed land owned by Cenex.

Sites 1, 2, 5, 6, 7, 19, and 27: Construction of the proposed Front Range Pipeline would cause a temporary loss of wheat and other crop yields.

Sites 3, 8, 11 through 16, 18, and 20 through 26: Impacts associated with construction on rangeland would result in a temporary loss of livestock grazing lands which may cause a short-term decrease in carrying capacity for livestock.

Sites 4 and 17: Impacts to these two sites would be a combination of the impacts listed above.

3.2.2 Mitigative Measures

To prevent problems with livestock, all fences and gates would remain closed at all times throughout construction except when construction is in the immediate vicinity or unless someone is permanently attending the gates. Harassment of livestock would not be permitted at any time during construction.

Prior to construction, the ROW would be inspected for noxious weeds (Appendix D). Any infestations would be sprayed before construction begins. During construction, all vehicles and equipment would be spray washed prior to entering another county, and when leaving an area of infestation and entering an area with no infestation. Upon completion of the project, the ROW would be reseeded with native grasses on rangelands and cultivated lands would be prepared as per the request of the leasee. The seeding mixture would be agreed upon by the MDSL, the leasee, and Cenex.

The leasee would be monetarily compensated the fair market value of any crop loss resulting from construction activities. If losses in carrying capacity are a problem, possible compensation may be made to the leasee.

3.3 GEOLOGY AND SOILS

3.3.1 Summary of Impacts

New disturbance to soil would occur as a result of construction activities and could result in a loss of topsoil through wind and water erosion, loss of revegetation potential from topsoil

loss or soil compaction, soil mixing, and drainage alteration from erosion. Impacts to soil resources are anticipated to be low and long-term.

Site 3: An approximate 25-foot width of rimrock would be removed within the ROW along the bluffs overlooking the Marias River valley to provide ROW access for pipe installation and a safe working environment for construction personnel and equipment.

3.3.2 Mitigative Measures

According to MPDES permit requirements, appropriate best management practices would be implemented to minimize soil erosion and transport due to storm water runoff and wind (Appendix C). To promote revegetation and protect valuable topsoil, the topsoil would be stockpiled separately from the trench spoils during construction activities, and replaced following reclamation. By separating the topsoil from the spoils (see Section 1.5.1.2), mixture of the two would be reduced, increasing the chances of a successful revegetation of disturbed soil. Areas compacted by construction activities would be ripped and disked to relieve soil compaction. Revegetation of the ROW would occur after reclamation is completed, as soon as practicable.

Areas where rimrock has been removed would be stabilized by installing rock terraces and geotextile matting to stabilize steep slopes and unstable soils, as needed.

3.4 HYDROLOGY

3.4.1 Summary of Impacts

The proposed actions would result in low to moderate, short-term impacts to surface waters. No ground water would be affected by the proposed action.

A temporary increase in turbidity in surface runoff may result from storm activity, which also may potentially increase turbidity levels in receiving waters. These increases in turbidity would be temporary, lasting only until the ROW and TUA's were reclaimed and revegetated.

Pipe construction and installation across wetlands and streams would generate moderate, short-term increases in suspended sediments during trench excavation and backfilling operations.

Water rights permits would allow diversion of 60 acre-feet and 30 acre-feet of surface waters from the Marias and Yellowstone rivers, respectively, for the purpose of hydrostatically testing the pipe. However, diversions would be subject to water availability and to restrictions by all senior water users. The testing procedure would not contaminate the test water although small amounts of soil and other suspended solids may be entrained.

3.4.2 Mitigative Measures

As per MPDES permit stipulations, appropriate sediment and erosion control devices and best management practices would be utilized to minimize storm water runoff and erosion resulting from construction activities (Appendix C).

To prevent contamination of wetlands and other waters from potential leaks or spills from equipment during construction, spill control and containment equipment would be made accessible at the immediate work site (Appendix B). This would provide for rapid deployment of equipment should a spill occur. No equipment would be refueled or greased within 100 feet of a wetland or any other surface water.

In an attempt to decrease turbidity in the water while constructing in moving currents through wetlands, streams and rivers, appropriate sediment control structures would be

installed to minimize sediment transport. Temporary bridges would be utilized for narrow water crossings to keep equipment and vehicles out of the waterways. For most water crossings, trench spoils would be stockpiled behind a berm in an upland area adjacent to the ROW. This action would reduce impacts to water quality until the pipe is installed and backfilling occurs. For the Marias River crossing, because of the steep valley walls adjacent to the north bank of the river, trench spoils for approximately one-half the width of the streambed would be stockpiled behind a diversion barrier constructed in the streambed (Figure 11, Appendix C).

Proposed construction methods for the wetland and stream crossings are presented in Sections 1.5.1.10 and 1.5.1.11. Construction methods for river and creek crossings have been approved by MDFWP personnel during on-site field inspections as required for approval of the “310 Permit” issued by each County Conservation District. “310 Permits” for eight of the nine counties have been approved and issued. No permit is necessary for Yellowstone County.

Temporary turbidity increases in wetlands and streams would be minimized by constructing these crossings as quickly as possible and during late summer and fall months when rainfall is generally low and surface flows are low.

Following the hydrostatic testing, the test water would be discharged through a dewatering structure made of silt fence and straw bales. These structures filter much of the suspended solids and help reduce any soil erosion resulting from the discharge. The rate of discharge from the pipe would be controlled to prevent flooding or erosion.

3.5 AIR QUALITY

3.5.1 Summary of Impacts

Impacts to air quality would be short-term and considered to be low. Grades of crude oil being transported through the proposed pipeline would have an overall lower content of sulfur, thus possibly decreasing SO_2 emissions from the Laurel Refinery. This would keep emissions in compliance with limits described in the State Implementation Plan for the Billings/Laurel area.

Construction equipment would generate exhaust emissions during construction. Vehicular traffic on the ROW would produce fugitive dust. Fugitive dust from the ROW could cause hazardous situations for construction workers and motorist on nearby highways.

3.5.2 Mitigative Measures

No mitigative measures are proposed to reduce emissions produced by construction equipment. To combat fugitive dust, water trucks would be available to water down the ROW as needed. Water for dust control would be obtained from private sources.

No air permits have been required for the construction of the Front Range Pipeline.

3.6 VEGETATION

3.6.1 Summary of Impacts

All impacts to vegetation are anticipated be low and short-term. Construction across rangelands would impact previously undisturbed areas of vegetation. Impacts to cultivated

lands would temporarily cause a loss of produced wheat. The maximum disturbed acreages anticipated for each site are listed in Table 1.2.

3.6.2 Mitigative Measures

The leasee would be monetarily compensated for the fair market value of any crop loss resulting from construction activities.

Areas reclaimed after construction would be monitored for three years. If reclamation is a failure, the soil would be prepared again and reseeded to ensure that reclamation is successful. For more detailed information, see Section 1.5.1.11 and the Storm Water Erosion Control Plan in Appendix C.

3.7 WETLANDS

3.7.1 Summary of Impacts

Impacts to wetland and riparian areas along the proposed pipeline corridor would be low and short-term. The proposed actions would result in the temporary disruption of wetland and riparian areas. These areas would be restored to near pre-construction conditions within two to three years following reclamation. Table 3.1 summarizes the area of disturbance to wetlands on state-owned tracts.

Table 3.1: Wetlands Delineated on State Lands. Cenex, Inc. Front Range Pipeline, 1995.

Site No.	Approx. Acreage within 75-foot ROW	Type of Wetland
4	0.02	Canal with wetland fringe
6	0.08	Saline wet meadow
14	0.03	Linear drainage with wetland fringe
18	0.03	Linear drainage with wetland fringe
21	0.05	Isolated depression
23	0.86	Linear drainage with wetland fringe

(MME 1995)

3.7.2 Mitigative Measures

Mitigation measures for impacts to all wetland and riparian areas would be the same in all cases on State lands.

Best management practices would be executed to decrease any unnecessary impacts to wetlands during construction (Appendix C). Wetland construction techniques have been designed to minimize the overall impacts and improve regrowth in wetlands by limiting the disturbance to wetlands encountered along the pipeline route. This can be best achieved by avoiding the staging of equipment and supplies and limiting access across wetland areas to essential personnel and equipment. The width of the ROW clearing would be minimized, to the extent practicable, to allow safe construction of the pipeline. No grading would occur in wetland areas.

Any petroleum products or other contaminants spilled in wetlands areas would be cleaned up as described in section 3.4.2 Hydrology, Mitigative Measures.

Sites 1, 2, 3, 5, 7 through 13, 15, 16, 17, 19, 20, 22, and 24 through 37: None of these sites have wetlands that would be impacted by construction, thus no mitigation is necessary.

Sites 4, 6, 14, 18, 21, 23, and 27: All machinery would be cleaned and inspected before entering a wetland. Vehicular traffic would be limited and restricted through the wetland. All construction would be conducted from working mats to minimize disturbance to vegetation and compaction of wetland soils. Wetland topsoil would be removed and stockpiled separately from the spoil. Upon completion of the installation of the pipe, the spoil would be backfilled with the topsoil being backfilled on top. Once backfilling and clean-up is completed, no traffic across wetland areas would be allowed.

3.8 WILDLIFE AND FISHERIES

3.8.1 Summary of Impacts

According to the USFWS and the MDFWP, no known wildlife concerns have been identified on state lands. No sensitive habitat for threatened and endangered species has been identified along the proposed ROW. Although five active raptor nests were recorded in the vicinity of the proposed ROW, the rearing of the young would not be affected if construction in the immediate area would occur after July 15. No raptor nests were located on state lands.

During the construction across rivers and creeks, fishery habitat could be affected by temporary increases in turbidity.

Impacts to any fishery or wildlife habitat resulting from the proposed action on state lands would be low to moderate and short-term.

The proposed action would result in a temporary loss of plant species that are used as forage for wildlife species.

3.8.2 Mitigative Measures

Pipeline construction areas located near active raptor nests would occur after July 15, at a time when the young have fledged and could fly to a more suitable site. At no time would any trees with raptor nests be cut down to accommodate the pipeline ROW.

Construction across creeks and rivers would be conducted at a time of year when water levels would be low. Construction would also be conducted in a timely matter with emphasis placed on eliminating unnecessary crossings of waterways by construction vehicles to minimize the degradation of stream banks and channels and to minimize increases in turbidity. Only those vehicles and construction equipment necessary for construction of the creek or river crossing would be allowed to enter the water. All other equipment and vehicles would be required to either cross at a pre-constructed crossing (county road or farm bridge) or at a temporary bridge or flume crossing built specifically for pipeline construction. All crossing and construction activities in the water would be limited to those necessary for the completion of the crossing in a timely fashion.

As required for final approval of “310 Permits”, construction methods for river and creek crossings were reviewed and approved by MDFWP personnel during on-site field inspections of each proposed crossing. “310 Permits” for eight of the nine counties have been approved and received. No permit is necessary for Yellowstone County.

Following reclamation, the ROW would be reseeded with native seed mixtures to restore stream bank stabilization and wildlife foraging habitat.

3.9 CULTURAL RESOURCES

3.9.1 Summary of Impacts

The overall level of impact to cultural resources resulting from the proposed actions would be below the level of significant following mitigation. Sites along the proposed pipeline ROW would be impacted directly by destruction of the site features within the construction area during grading and trenching operations. The sites could also be impacted indirectly by vandalism or negligence during construction.

3.9.2 Mitigative Measures

Although the proposed pipeline alignment avoids most archaeological sites, some areas cannot be bypassed. Where the pipeline is proposed to go through or adjacent to a feature, mitigative measures determined by the SHPO or other agency archaeologists would be performed. Agency stipulations regarding cultural resources would be followed prior to and during construction to mitigate impacts to cultural resources. Management recommendations for features that could be impacted include avoidance of features at the edge or outside of the ROW, monitoring during construction, excavations of features within the ROW (GCM 1995), and boring under the site.

Potential indirect impacts during construction would be reduced by restricting off-ROW access along the project corridor. Known sites along the ROW would be fenced off to help reduce destruction and/or vandalism while working on the ROW.

Cultural resource sites identified during construction on private land would be recorded within the ROW according to landowner stipulations.

3.10 RECREATION AND AESTHETICS

3.10.1 Summary of Impacts

Hunter access to game areas could be temporarily hampered due to restrictions in areas of construction activities. Boating and fishing activities on some waterways may be temporarily impeded and/or obstructed during construction activities. Tourist traffic could be impeded where construction activities are occurring at roadway crossings. All impacts would be considered low and short-term.

Construction of the pump stations at Santa Rita and midway near Raynesford would cause visual obstructions. At the Santa Rita Terminal, the nearest residence to the pump station would be approximately 1,200 feet away. Visual impacts from this station would be moderate and long-term. The nearest residence to the midway pump station would be approximately 1.5 miles away with impacts being low and long-term.

3.10.2 Mitigative Measures

County Conservation Districts would be notified 24 to 48 hours prior to commencing construction activities at any perennial stream crossing. Warning signs would be visibly placed upstream of waterway construction areas to warn recreationalists of ongoing downstream construction activities.

To improve the visual quality of the pump station facilities, all equipment and operations would be housed in one building at each site.

3.11 TRANSPORTATION AND UTILITIES

3.11.1 Summary of Impacts

Impacts to transportation and utilities would be low and short-term. All unpaved roads would be open cut, creating a temporary detour of traffic flow around these areas. All crossings of railroads and paved roadways would be bored from ROW line to ROW line, with no interruptions to traffic. Some local traffic slowing would occur as a result of curious passers-by.

Increased traffic would occur near areas of construction and around the areas associated with the pipe yards (Laurel, Hedgesville, Stanford, Collins, Shelby). There would be a short-term increase of personal vehicular traffic from construction personnel and an increase in truck traffic associated with the construction of the pipeline (pipe stringing trucks, etc.). Approximately 400 persons would be working on the project and would be driving to and from the work site. Trucks transporting equipment and pipe to and from the construction site would also be accessing the highways and local roads.

It is anticipated that greater than 50 percent of the construction workers would be hired locally and would commute to and from the area of construction. The remaining work force would be hired from out-of-state. The employees would temporarily stay in local hotels, rental properties, and/or at trailer parks and would commute from the nearby communities. Once construction in the area has been completed, the workers would move on to the next community.

No impacts are anticipated to any public utilities by the proposed action.

3.11.2 Mitigative Measures

Warning signs and flag-persons would be utilized at roadway crossings, as necessary.

The Montana One-Call System would be used by the construction contractor to alert owners of the impending construction. To the extent possible, all utilities would be notified well in advance of construction to incorporate their facility locations on the construction drawings. Prior to construction, utility lines would be located on-site, flagged and staked. The proposed pipeline would be constructed under the existing pipeline, with a minimum clearance of one foot between the lines.

CHAPTER 4

CONSULTATION AND COORDINATION

4.1 PERSONNEL CONSULTED

The following people were consulted for the preparation of this document.

NAME	AGENCY/ORGANIZATION
Mike Glaven	MDHES, Air Quality Division
Roxanne Lincoln	MDHES, Water Quality Bureau
Mike Pasichnyk	MDHES, Water Quality Bureau
Jeff Ryan	MDHES, Water Quality Bureau
Dixie Brough	MDNRC, Water Rights Bureau
Marty Van Cleave	MDNRC, Water Rights Bureau
Scott Irvin	MDNRC, Water Rights Bureau
Glen Mc Donald	MDNRC, Water Projects Bureau
Graham Taylor	MDFWP
Dick Ellis	MDFWP
Charlie Eustace	MDFWP
Ken Frazier	MDFWP
Mike Poore	MDFWP
Marylee Norris	Dept. of State Lands, Surface Management Bureau
Jean Ramer	U.S. Army Corps of Engineers, Regulatory Branch
Chandler Peter	U.S. Army Corps of Engineers, Regulatory Branch
Doug McDonald	U.S. Army Corps of Engineers, Regulatory Branch
Steve Oddan	U.S. Fish and Wildlife Service
Rob Hazelwood	U.S. Fish and Wildlife Service
Kemper McMaster	U.S. Fish and Wildlife Service
Debbie Clevenger	Environmental Protection Agency
Gene Munson	GCM Services, Inc.
David Ferguson	GCM Services, Inc.
Jeff Berglund	Morrison-Maierle Environmental Corp.
Bob Carroll	Morrison-Maierle Environmental Corp.

4.2 REVIEW PERSONNEL

The following personnel were asked to review this document.

NAME	AGENCY/ORGANIZATION
Greg Hallsten	MDSL
Mark Ahner	MDSL
Russ Offerdahl	MDSL
Craig Roberts	MDSL
Don Kendall	MDSL
Tom Ellerhoff	MDHES
Ron Guse	MDNRC
Karl Helvik	MDT
Eugene Stettler	MDT
Mick Johnson	MDT

Wetland reports were sent for review to MDSL, MDNRC, MDFWP, COE, and USFWS. Cultural Resource reports were sent to SHPO, MDSL, MDNRC, and COE for review.

4.3 LIST OF PREPARERS

Trent A. Miller	Trigon Engineering Inc., Denver, CO 80202
Robert W. Acree	Trigon Engineering Inc., Denver, CO 80202
Robert E. McDaniel	Trigon Engineering Inc., Denver, CO 80202

Montana Department
of
Fish, Wildlife & Parks

20 December 1994

Trent A. Miller
Wildlife Biologist
Trigon Engineering Inc.
1099 18th Street
Plaza Tower, Suite 1700
Denver, CO 80202-1917

Trent,

I have asked our regional wildlife staff to review the route of the proposed Cenex Co. pipeline project between Cutbank and Laurel. Let me get to the point: they find no appreciable or significant impacts to wildlife (habitats) along its route. MFWP wildlife biologists involved in the review included Gary Olson of Conrad, Jim Williams of Great Falls and Dick Bucsis of White Sulphur Springs.

If in the course of your field reconnaisance in the months to come, you discover what you believe are any significant wildlife concerns, please do not hesitate to contact me or my staff. We would be glad to assist in further evaluation of any impacts on a site specific basis.

Sincerely,

Graham Taylor
Regional Wildlife Manager

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Montana Department
of
Fish, Wildlife & Parks

February 2, 1995

Mr. Trent A. Miller
Wildlife Biologist
Trigon Engineering Inc.
1099 18th St.
Plaza Tower, Suite 1700
Denver, CO 80202-1917

Dear Trent:

Our regional fisheries and wildlife biologists have reviewed the route of the proposed Cenex Co. pipeline project between Cutbank and Laurel. Our wildlife staff does not anticipate any significant impacts to wildlife along this route, however there are some fisheries concerns.

During 1991 our regional fisheries staff conducted a study in the area of your proposed pipeline in Region 5 as part of the Altamont Gas Transportation Project. This study was conducted to determine the presence of the northern redbelly dace X finescale dace hybrid in the Musselshell River and it's tributaries in the vicinity of their proposed pipeline.

The northern redbelly dace (Phoxinus eos) X finescale dace (Phoxinus neogaeus) hybrid are a unique species in that nearly all specimens collected are females, they are usually found in the presence of only one parent species, and they are apparently a product of clonal or parthenogenetic reproduction. Northern redbelly dace are fairly common in Montana, but finescale dace have never been collected in the state. Due to the uniqueness of this hybrid species and it's limited distribution in the state, it was designated as a Species of Special Concern in Montana in 1985.

Ten hybrid specimens of northern redbelly/finescale dace were collected in the Musselshell River between Painted Robe Creek and the Musselshell diversion dam in 1985. As part of the environmental review for their project, Altamont funded a study to determine the presence of this hybrid in other streams in the general vicinity of their proposed pipeline.

Fish samples were collected from 26 different sites in the Musselshell River drainage in August 1991. Northern redbelly/finescale dace hybrids were positively identified in one sample collected in the South Fork of Big Coulee Creek (T4N, R19E, Sec.18 DC). A second sample collected in Big Coulee Creek (T4N, R19E, Sec. 5DD) contained one specimen exhibiting some characteristics of the hybrid, but could not be positively

identified. Northern redbelly dace (Phoxinus eos) were collected at five sites: two on Big Coulee Creek, one on the South Fork of Big Coulee Creek where the hybrids were found, one on Fish Creek, and one on the Musselshell River at Shawmut. The presence of this parent species in the vicinity of hybrids indicates the potential of collecting hybrids at any of these sites with more intense sampling. Your proposed pipeline will cross Fish Creek and Big Coulee Creek just upstream of sample sites where northern redbelly dace were collected, and will cross the South Fork of Big Coulee Creek at the same location where hybrids were collected.

Due to the presence of this unique species in the area, we will require special considerations when crossing these streams. The dace appear to prefer riffle type habitat when available, so all crossings on these streams should avoid riffle areas. You should file a 310 application for each crossing with the Lower Musselshell Conservation District in Roundup so individual crossing sites can be inspected before construction begins. Disturbance of these streams and their associated riparian areas should be kept to an absolute minimum, and crossings should be planned to coincide with low flows to minimize downstream sedimentation. Additional precautions should also be taken to prevent any oil from reaching these waters in the event a break occur in the pipeline.

If you have any questions or would like more information please contact Ken Frazer at (406) 252-4654. Ken is the regional fisheries biologist that was involved in the Altamont study.

Sincerely,

R. Ellis

Dick Ellis
Regional Supervisor

United States Department of the Interior

FISH AND WILDLIFE SERVICE
ECOLOGICAL SERVICES
100 N PARK, SUITE 320
HELENA MT 59601

IN REPLY REFER TO:

File: 7201 B

November 18, 1994

Trent A. Millar
Trigon Engineering Inc.
1099 18th Street
Plaza Tower, Suite 1700
Denver, Colorado 80202-1917

Dear Mr. Millar

Thank you for your letter of October 28 requesting U.S. Fish and Wildlife Service (Service) comments on threatened and endangered species and other fish and wildlife concerns in connection with the Front Range Pipeline Project that will consist of constructing a 16 inch crude oil pipeline from Santa Rita to Laurel, Montana.

The Service's National Wetland Inventory maps for the proposed project area have not been completed. As a result, we have no reliable way of determining the extent of wetlands that may be impacted over much of the route shown on the maps accompanying you letter. We note however, that the pipeline will be placed across and closely parallel to many creeks (180) and six rivers. Where stream or drainage crossings are required, we recommend crossing on existing bridges if possible. If that is not possible, we recommend selecting a stable section of stream where there are no wetlands and limited riparian vegetation to keep adverse impacts to a minimum. The timing of any stream crossings should be coordinated with the Service and the Montana Department of Fish, Wildlife and Parks to assure fisheries impacts are avoided or minimized.

To minimize wetland impacts, wetlands along the project corridor should be identified (mapped) and the pipeline route designed to avoid all wetlands. Wetlands that cannot be avoided should be identified so that any adverse impacts can be mitigated. Where construction in wetlands is necessary, we recommend that equipment operate on mats to avoid unnecessary compaction. We are further concerned that equipment used during construction may adversely impact wetlands directly, or result in indirect impacts if trenching disrupts wetland seals and results in subsequent wetland drainage. Please provide us with a copy of any reports showing the delineated wetlands along the proposed route.

In connection with potential wetland impacts and river crossings, we recommend Trigon Engineering continue to work closely the Corps of Engineers (COE) field office [406]444-6670) regarding any Section 404 permits that may be needed. With regard to such permits, depending on permit type and other factors, the Service may be required to review permit applications and recommend fish and wildlife protection or mitigation measures to the COE as appear reasonable and prudent at that time. On-site inspections by Service personnel may be necessary to provide technical assistance regarding wetland avoidance, minimization or mitigation.

The Federally-listed endangered and threatened species which occur or may occur within the project area are:

Listed Species	Expected Occurrence
Bald eagle (Haliaeetus leucocephalus)	Year-round resident, Nesting, Winter resident, Migrant
Peregrine falcon (Falco peregrinus)	Summer resident, Migrant
Black-footed ferret (Mustela nigripes) (Cynomys sp.)	Potential resident in prairiedog towns
Piping plover (Charadrius melodus)	Alkali Lake, Pondera Cty Summer resident, Nesting
Pallid sturgeon (Scaphirhynchus albus)	Year-round resident, Missouri River

Candidate species that may occur within the project area are identified below. Many Federal agencies have policies to protect candidate species from further population declines. Although candidate species have no legal status and are accorded no protection under the ESA, they are included here to alert your agency of potential proposals or listings. The Service recommends that the Montana Natural Heritage Program be contacted (Margaret Beer (406)444-5354) for specific information on candidate species of plants and animals that occur in Montana. It is important to note that there are several species of fish in the Missouri River System that are Category 2 candidates for listing under the Endangered Species Act and other species of special concern that may occur in the project area.

SPECIES	**CATEGORY***	**SCIENTIFIC NAME**	**EXPECTED OCCURRENCE**
Fish			Rivers & tribs.
Sturgeon chub	2	Hybopsis gelida	Missouri River
Paddlefish	2	Polyodon spathula	Missouri River
Blue Sucker	2	Cycleptus elongatus	Missouri River

Many Federal agencies have policies to protect candidate species from further population declines. Other candidate species that may occur within your project area include:

SPECIES	**CATEGORY***	**SCIENTIFIC NAME**	**EXPECTED OCCURRENCE**
Mammals			
Preble's shrew	2	Sorex preblei	Sagebrush, Grasslands
Spotted bat	2	Euderma maculatum	S, central MT Shrub-

			steppe, conifer parkland
Swift fox	2	*Vulpes velox*	Eastern MT

SPECIES OCCURRENCE	CATEGORY*	SCIENTIFIC NAME	EXPECTED
Birds			
Ferruginous hawk	2	*Buteo regalis*	grasslands statewide
Northern Goshawk	2	*Accipiter gentilis*	forests statewide
Mountain plover	1	*Charadrius montanus*	grasslands statewide
Long-billed curlew	3C	*Numenius americanus*	grasslands/wetland
Black tern	2	*Chlidonias niger*	wetlands statewide
Loggerhead shrike	2	*Lanius ludovicianus*	woodlands, shrublands
Plants			
Barr's Milkvetch	2	*Astragalus barrii*	SE MT, Buttes and Hilltops
Long-styled thistle	2	*Cirsium longistylum*	Central MT; Meadows
Rabbit Wild Buckwheat	2	*Eriogonum lagopus*	S Central MT; Pryor Mtns, sagebrush and grasslands
Persistent Sepal Yellowcress	2	*Rorippa calycina*	E. MT.; Riverbanks

*1 = Federal T/E listing appears appropriate and is anticipated. 2 = Current data insufficient to support listing. 3C = More widespread or abundant than previously believed, or no immediate threats identified.

Section 9 of ESA prohibits knowingly taking listed species, which includes harm, harassment, capture, or collection activities, except when specifically permitted by the U.S. Fish and Wildlife Service. Please also be apprised of the potential application of the Migratory Bird Treaty Act of 1918 (MBTA), as amended, 16 U.S.C. 703 et seq; and the Bald Eagle Protection Act of 1940 (BEPA), as amended, 16 U.S.C. 668 et seq; to your project. The MBTA does not require intent to "take" to be proven and does not allow for "take," except as permitted by regulations. Section 703 of the MBTA provides: "Unless and except as permitted by regulations...it shall be unlawful at any time, by any means or in any manner, to...take, capture, kill, or attempt to take, capture, or kill, possess... any migratory bird, or any part, nest, or eggs of any such bird...." The BEPA prohibits knowingly taking, or taking with wanton disregard for the consequences of such an activity, any bald or golden eagles or their body parts, nest, or eggs, which includes collection, molestation,

disturbance, or killing activities.

Considering the specific nature and locations of the proposed pipeline, we do not expect any project related impacts to the peregrine falcon. Bald eagles occur as seasonal migrants throughout the project area, and as winter residents along the Musselshell River and Yellowstone River. There are no known bald eagle nest sites within 1 mile of the projects identified on your maps; however there is a bald eagle nest site northwest of Laurel near the Hailstone National Wildlife Refuge.

Prairie dog (*Cynomys sp.*) towns are considered potential habitat for black-footed ferrets. Considering the specific locations of the proposed pipeline, the potential for encountering prairie dog colonies appears moderate. If prairie dog towns are found within the project rights-of-way, surveys for black-footed ferrets may need to be conducted and survey reports submitted to this office for review and concurrence within one year prior to disturbance to the towns. You should contact us for guidelines for conducting ferret surveys if you determine that prairie dog towns or ferrets may be affected by the proposed project.

Piping plovers could be impacted if your proposed construction crosses wetlands in the vicinity of Alkali lake near Cutbank. If construction work is scheduled before May 15 or after July 15 (or stay at least 1/4 mile from these potential nesting areas) impacts to these species would be minimized. We recommend surveying any potential wetland areas to determine if the birds are present. This could be done in conjunction with an overall raptor survey for the entire corridor.

While the proposed pipeline construction does not directly affect Service-managed lands, it does appear to cross drainages that provide water to the Benton Lake National Wildlife Refuge and Hailstone National Wildlife Refuge. Operation of this pipeline could reasonably be expected to cause substantial harm to the environment if a discharge of oil into navigable waters or sensitive wildlife environments were to occur. Therefore, we encourage sufficient pre-construction planning of the pipeline specifications and location so that the potential for future operational impacts to fish and wildlife and their habitats are prevented.

We appreciate your efforts to consider and conserve fish and wildlife resources, including threatened and endangered species. If you have questions regarding this letter, please contact Mr. Steve Oddan of our Billings Suboffice (406) 657-6750 or Rob Hazlewood of our Helena Office at (406) 449-5225.

Sincerely,

Kemper M. McMaster
Field Supervisor
Montana Field Office

STO/RMH/jf/rmh

cc: Suboffice Coordinator, Ecological Services (Billings, MT)
Corps of Engineers (Helena, MT)

CHAPTER 5

REFERENCES

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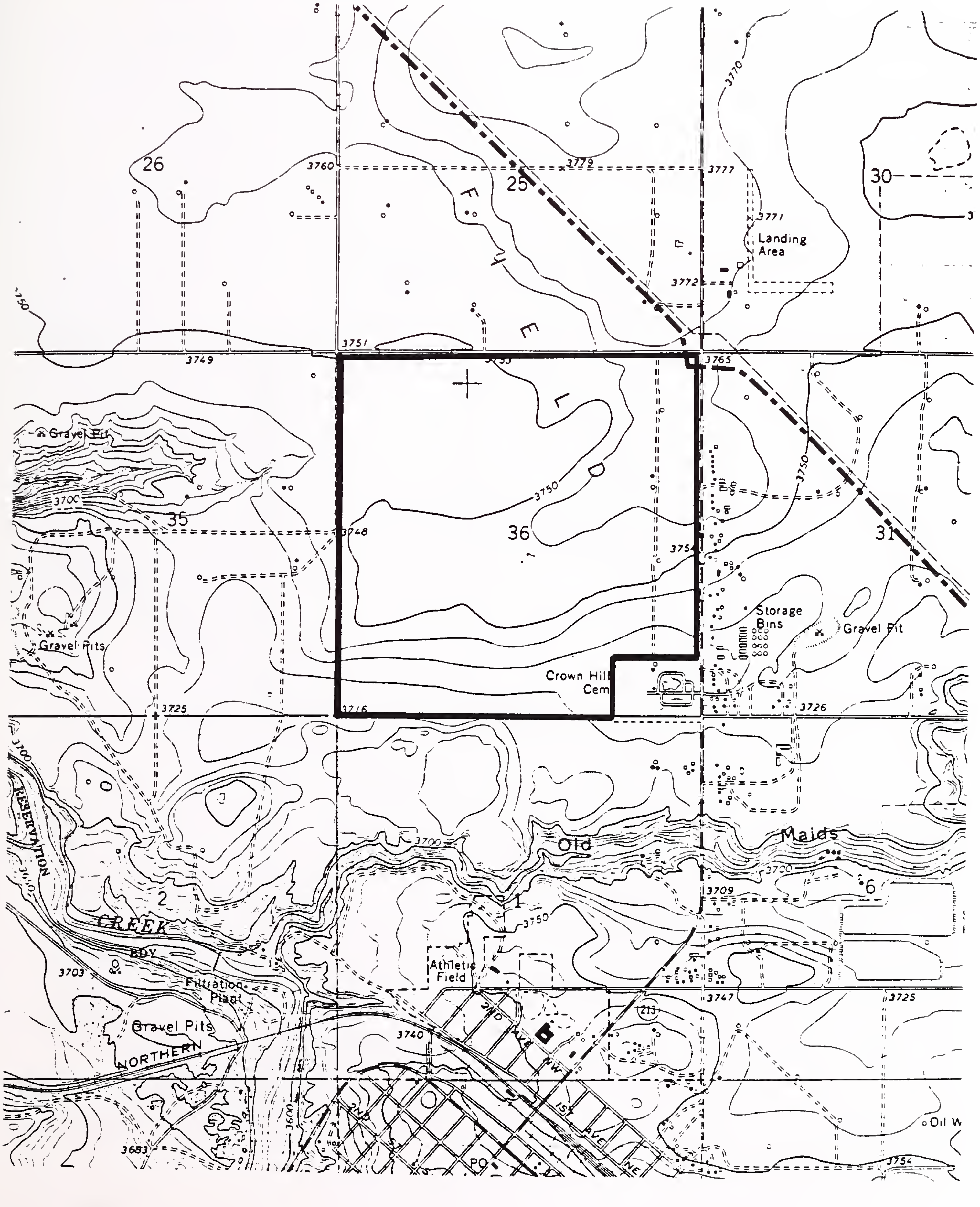
APPENDIX A

Maps of Montana State-owned and Administered Lands

Site 1: Sec. 36, T34N, R6W, GLACIER COUNTY



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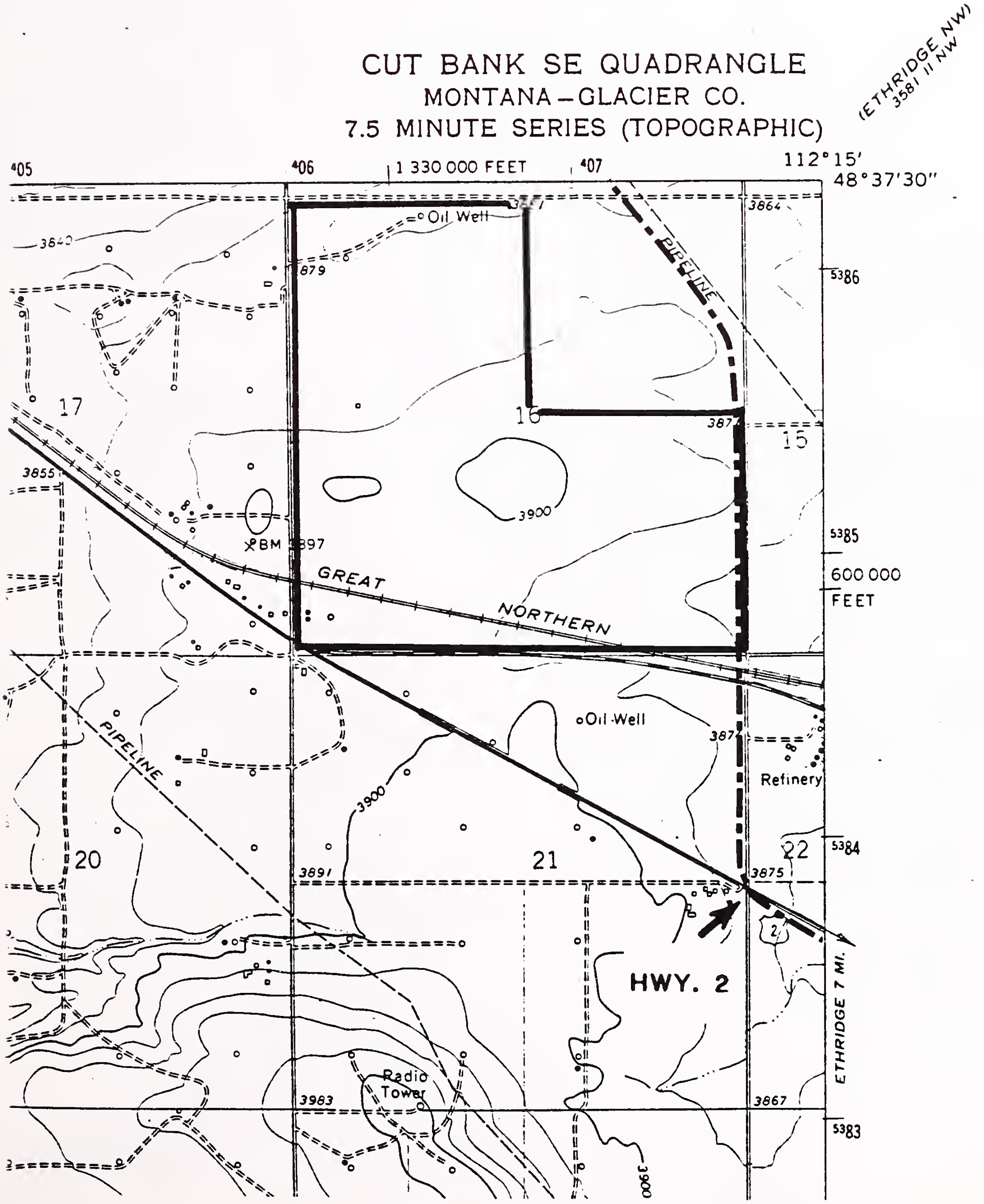
Site 28: Sec. 21, T33N, R5W, GLACIER COUNTY



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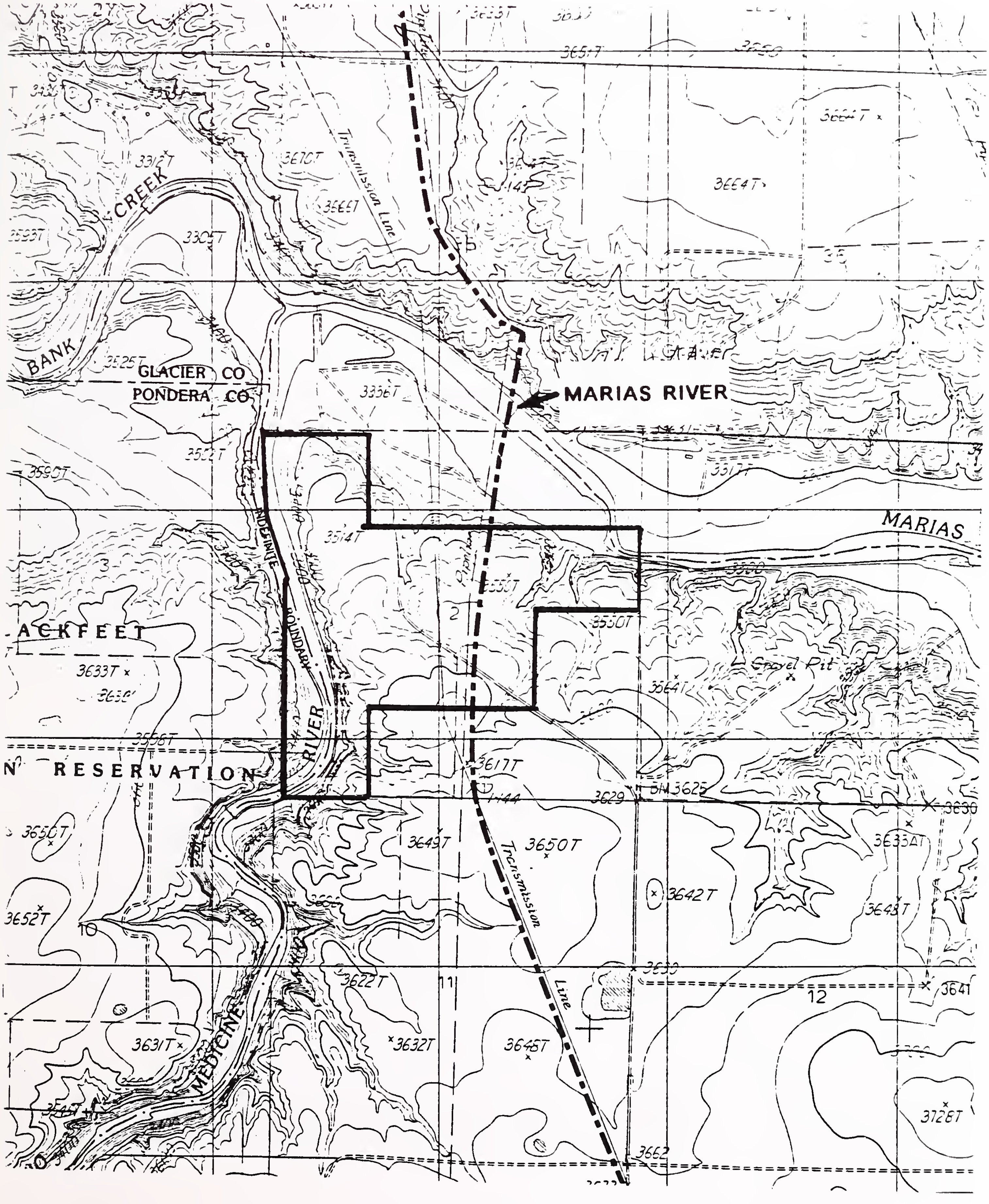
Site 38: Sec 35, T32N, R5W, PONDERA COUNTY



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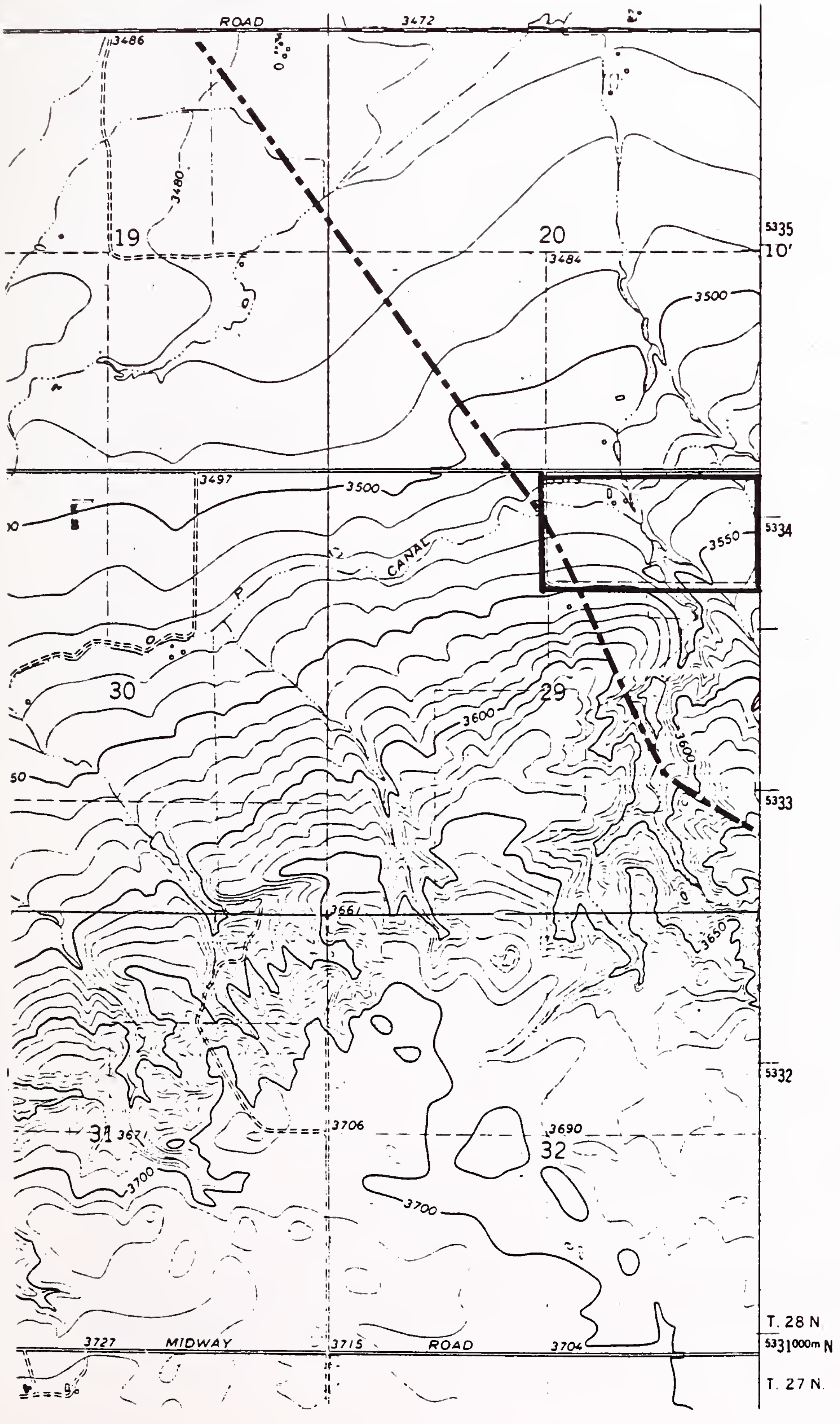

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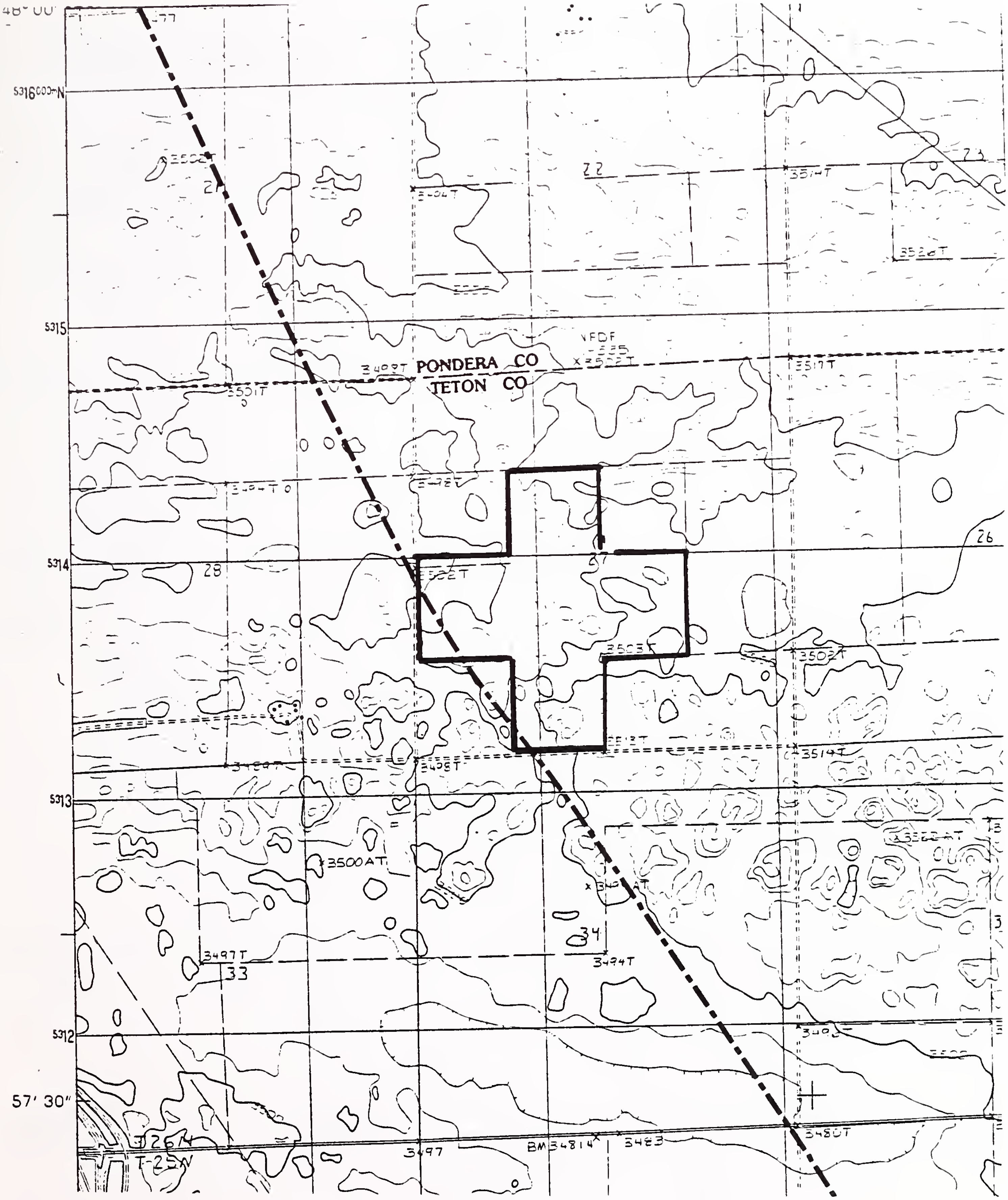
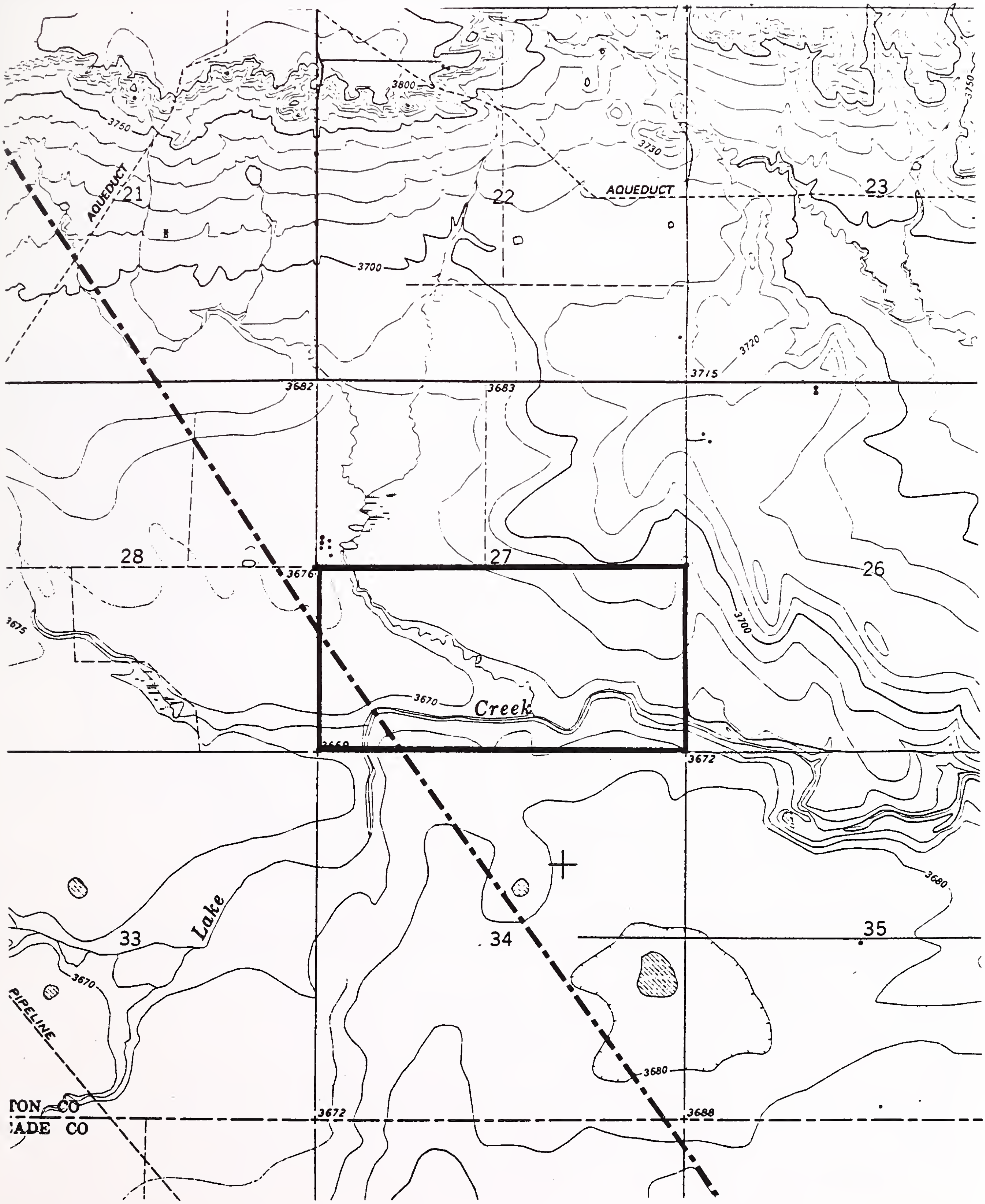
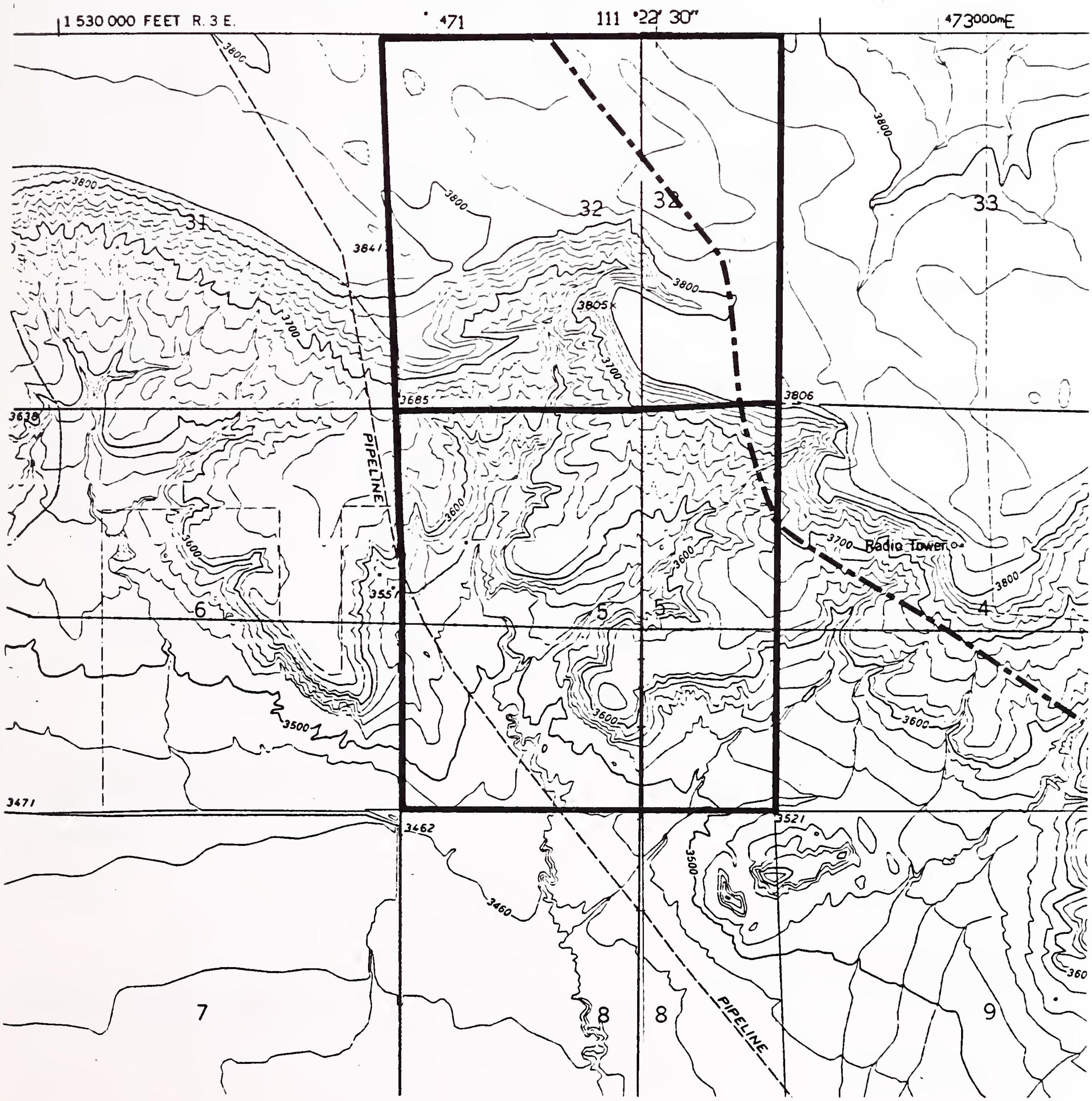


Site 6: Sec 27, T23N, R2E, TETON COUNTY

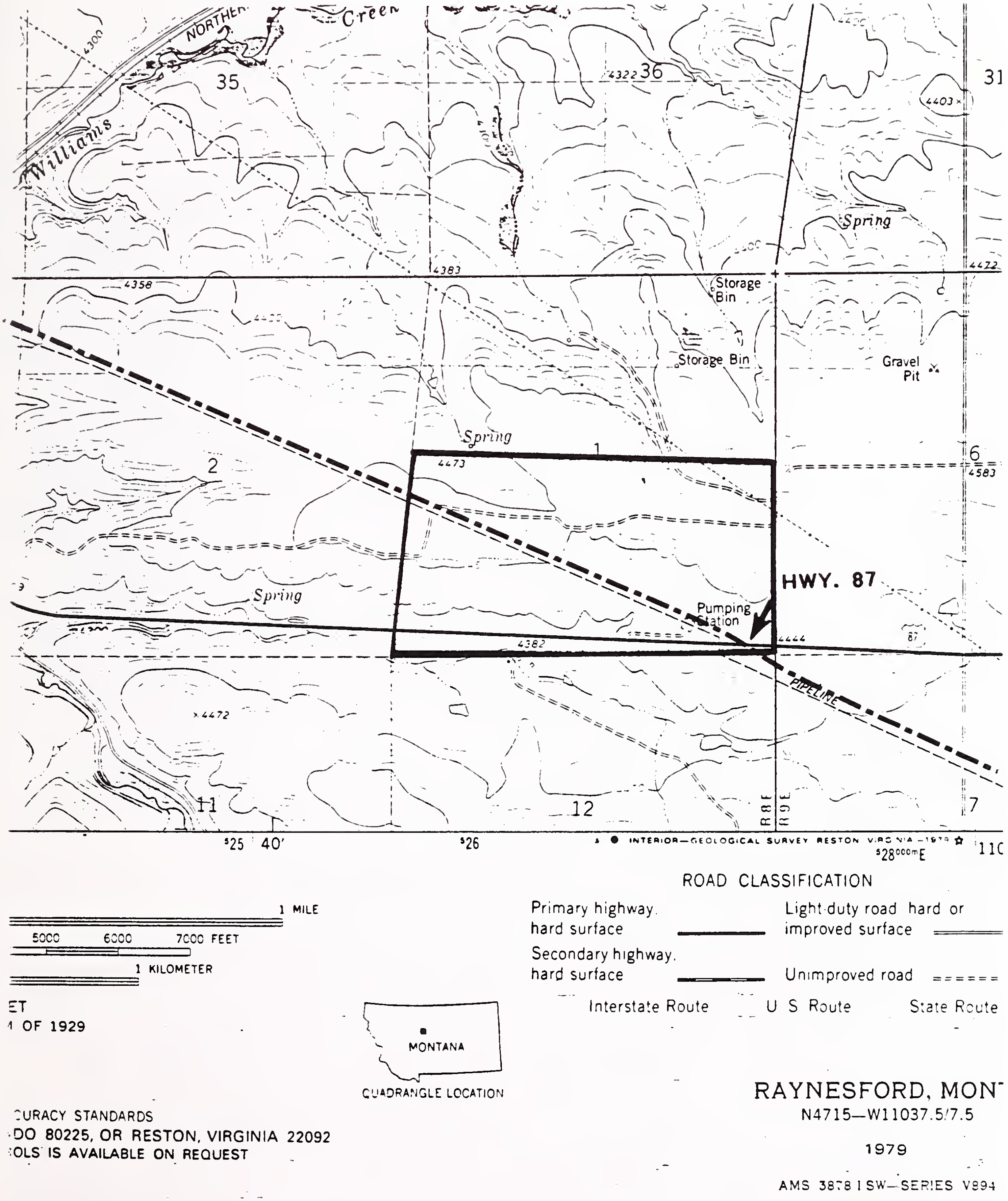


Site 7: Sec. 32, T22N, R3E, CASCADE COUNTY
Site 8: Sec. 5, T21N, R3E, CASCADE COUNTY

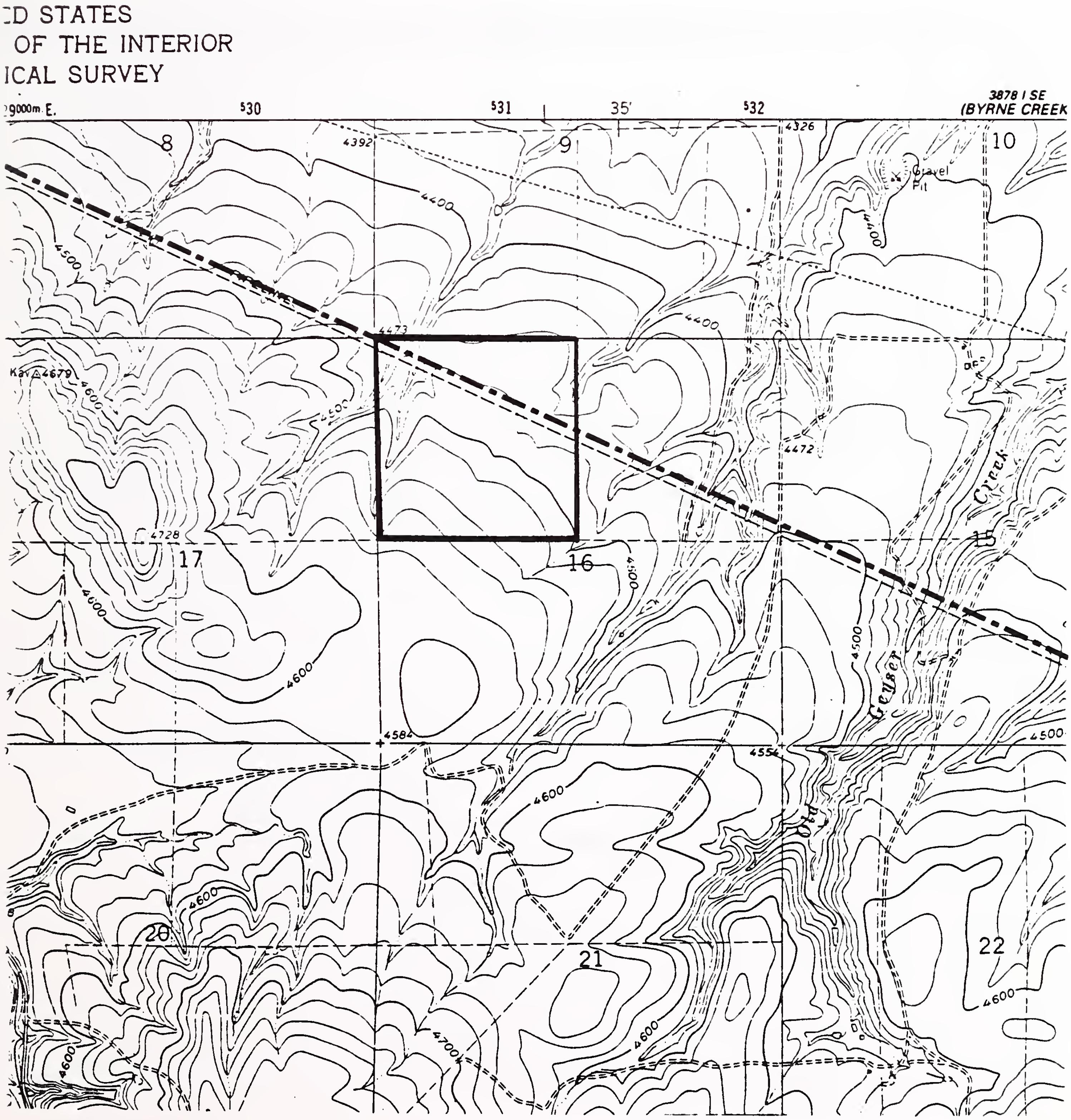
MANCHESTER QUADRANGLE
MONTANA-CASCADE CO.
7.5 MINUTE SERIES (TOPOGRAPHIC



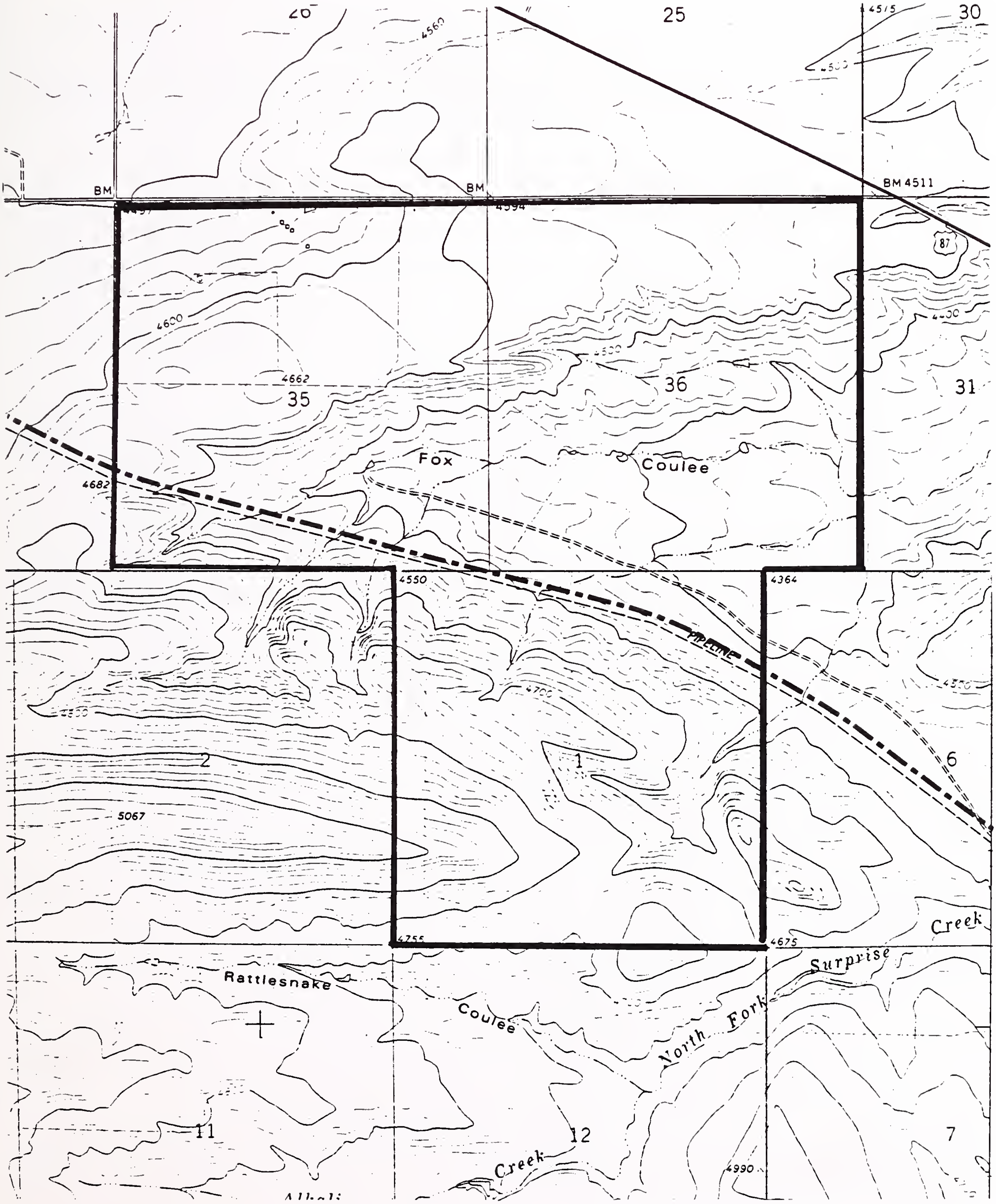
Sites 9 and 33: Sec. 1, T17N, R8E, JUDITH BASIN COUNTY



Site 10: Sec. 16, T17N, R9E, JUDITH BASIN COUNTY



Site 11: **Sec. 35, T17N, R10E, Sec. 1, T16N, R10E, JUDITH BASIN COUNTY**



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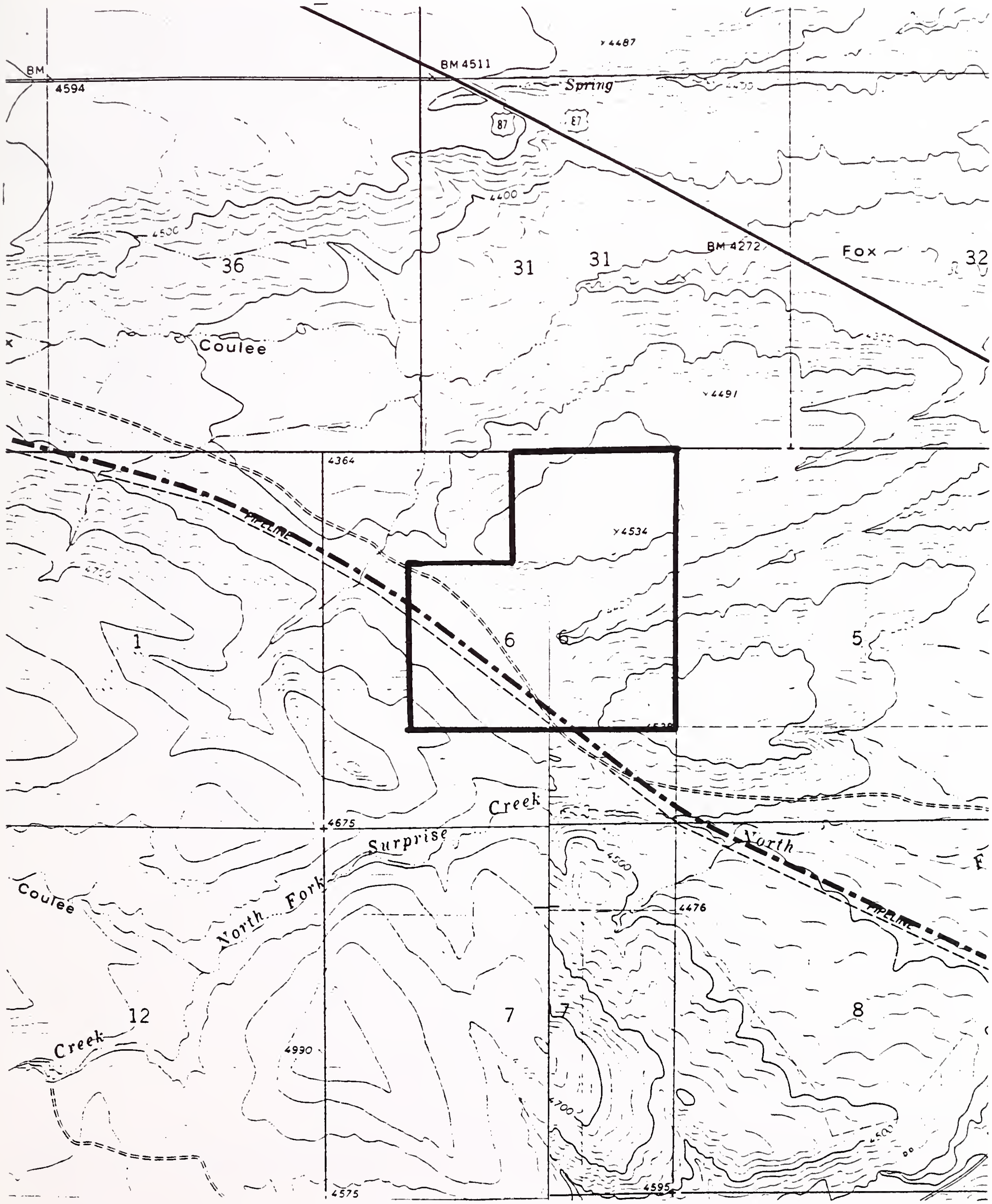
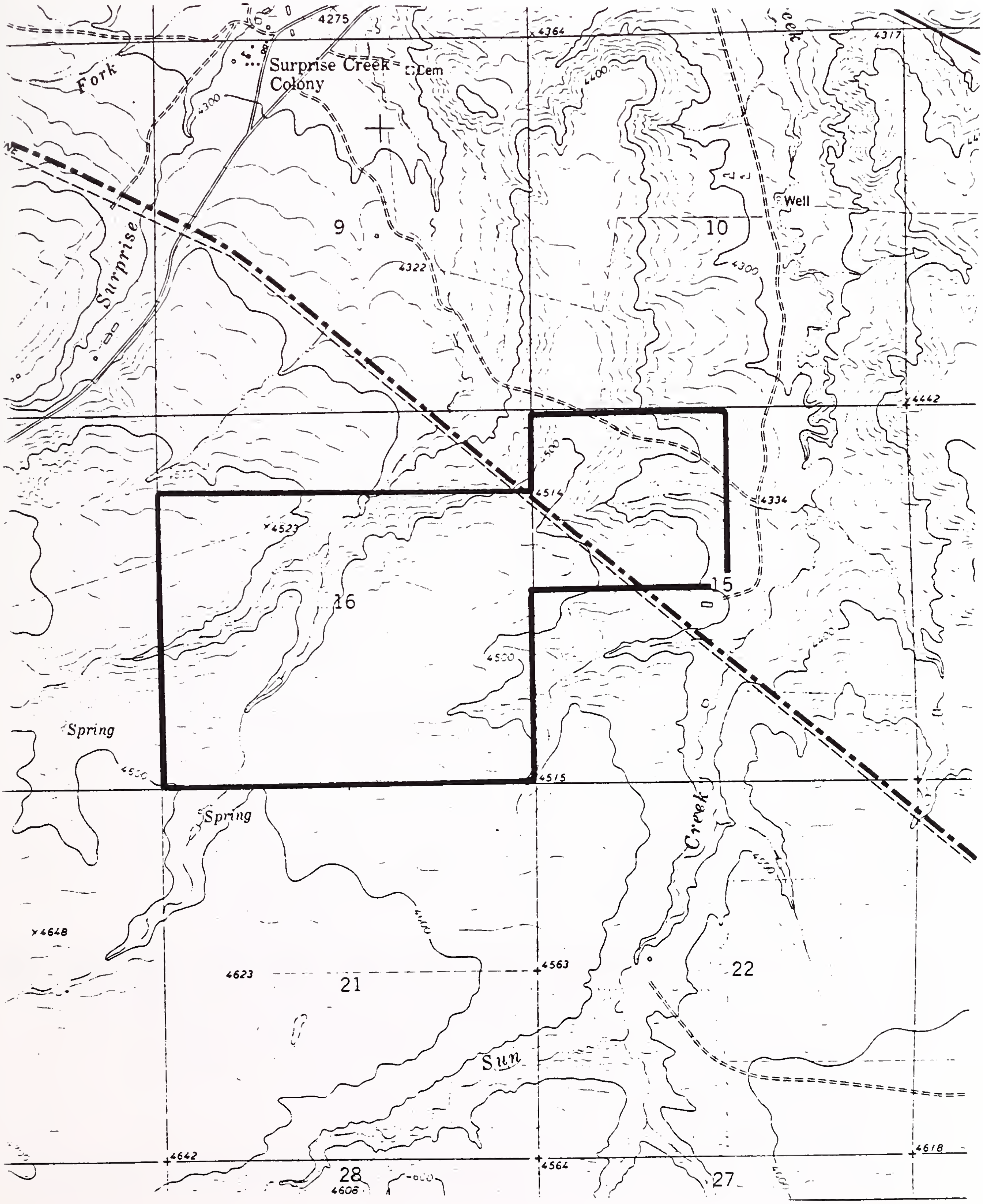
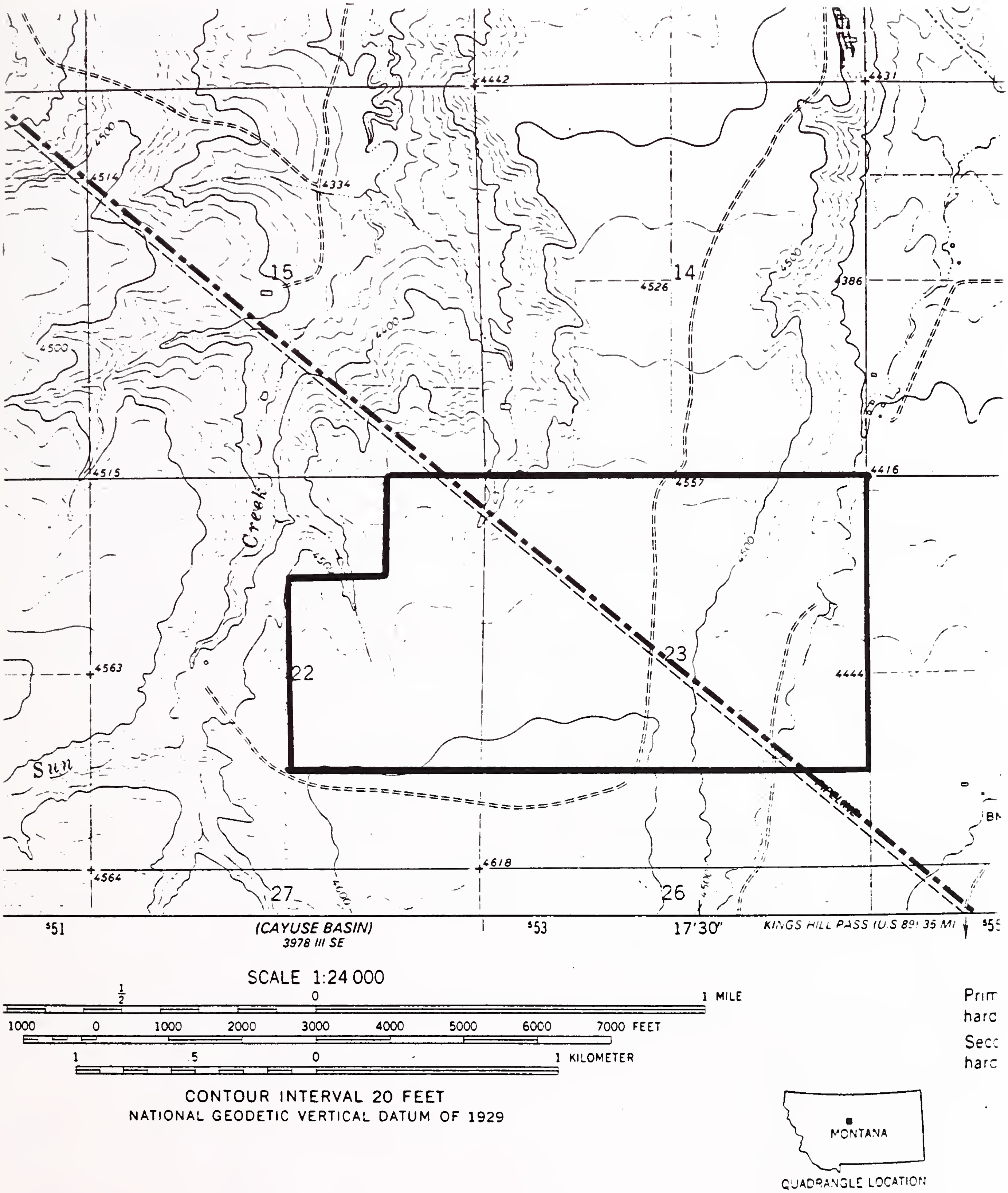


Site 13: **Secs. 15 & 16, T16N, R11E, JUDITH BASIN COUNTY**



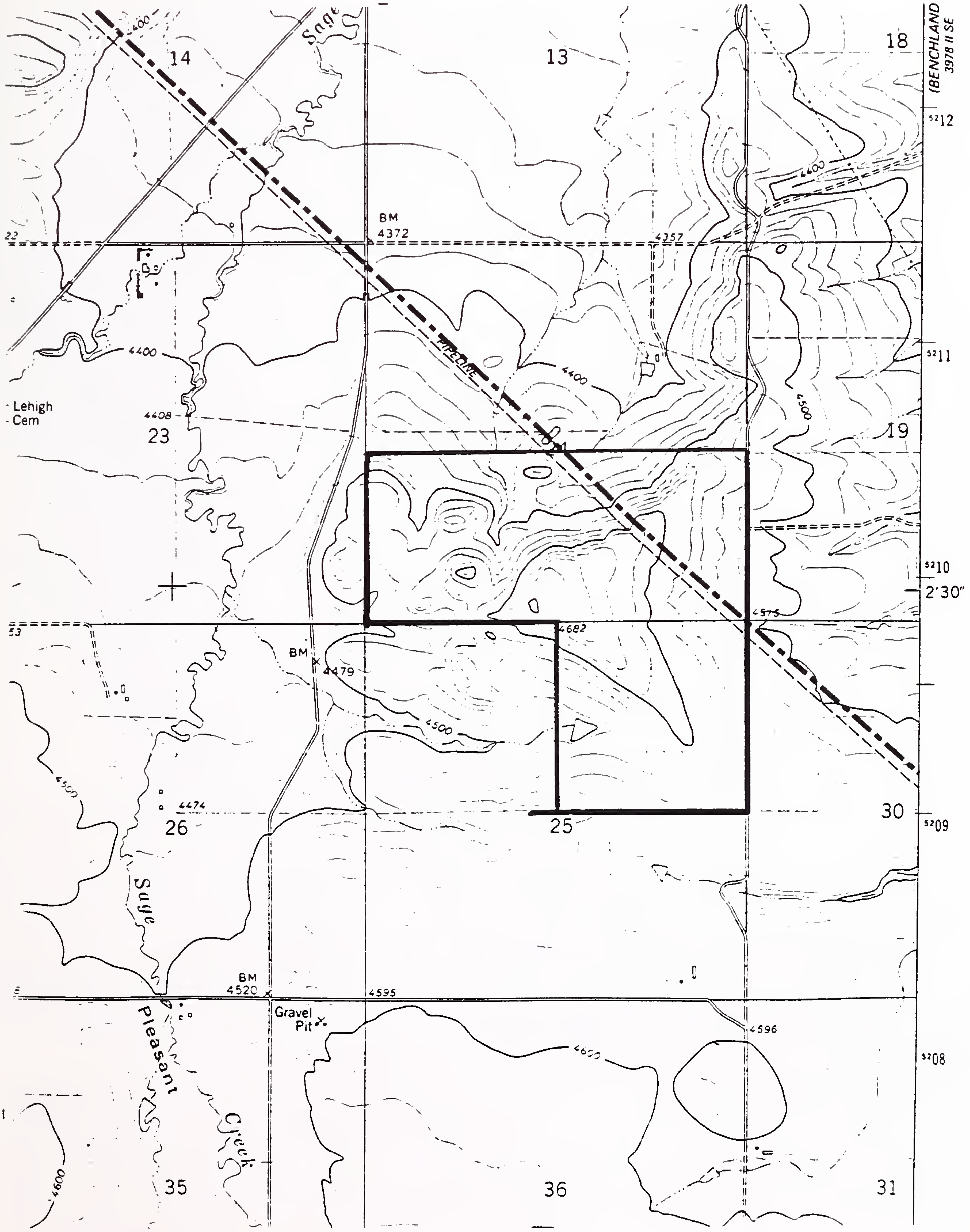
Site 14: Secs. 22 & 23, T16N, R11E. JUDITH BASIN COUNTY



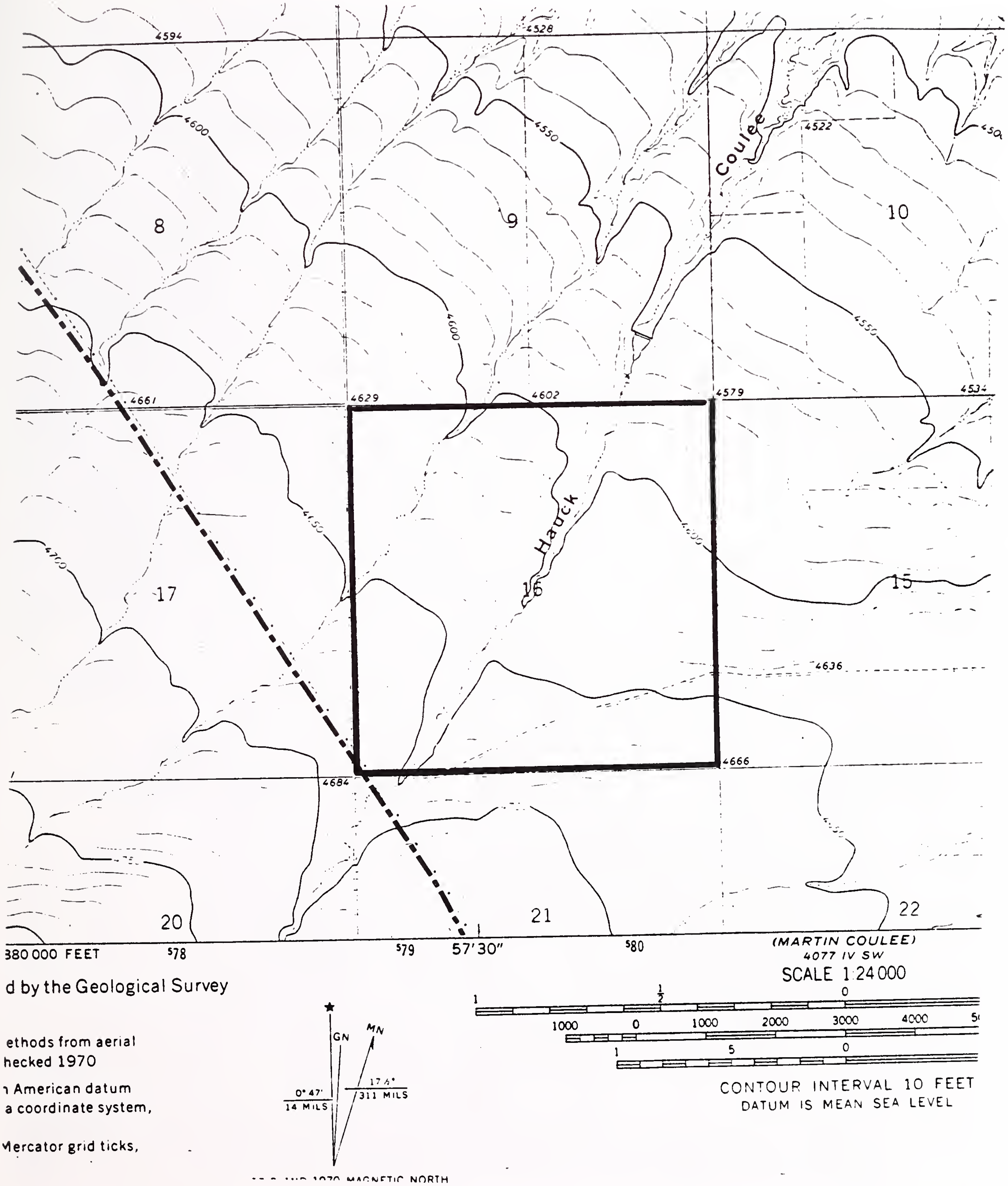
THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS

3Y U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092

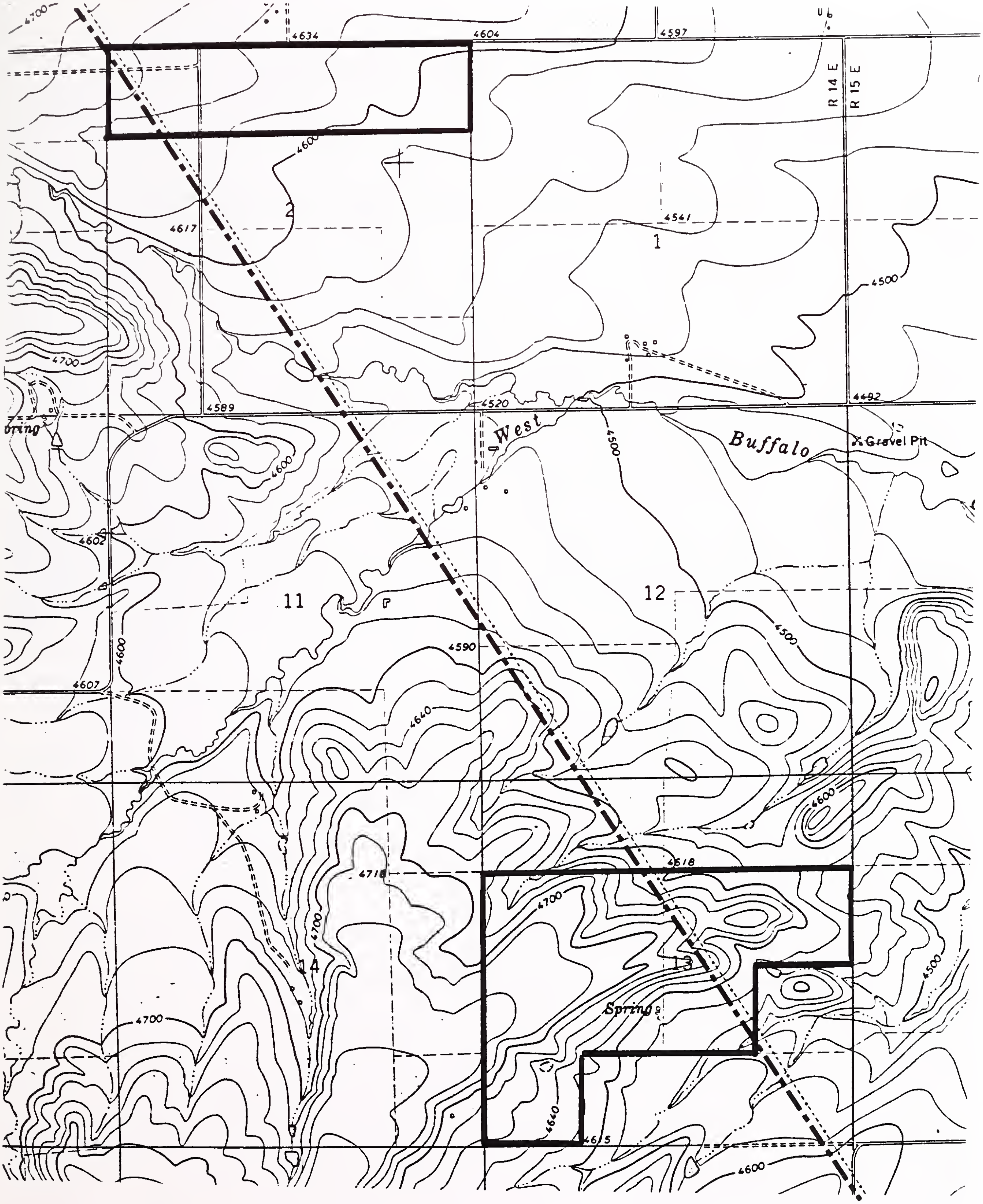
Site 15: Secs. 24 & 25, T15N, R12E, JUDITH BASIN COUNTY



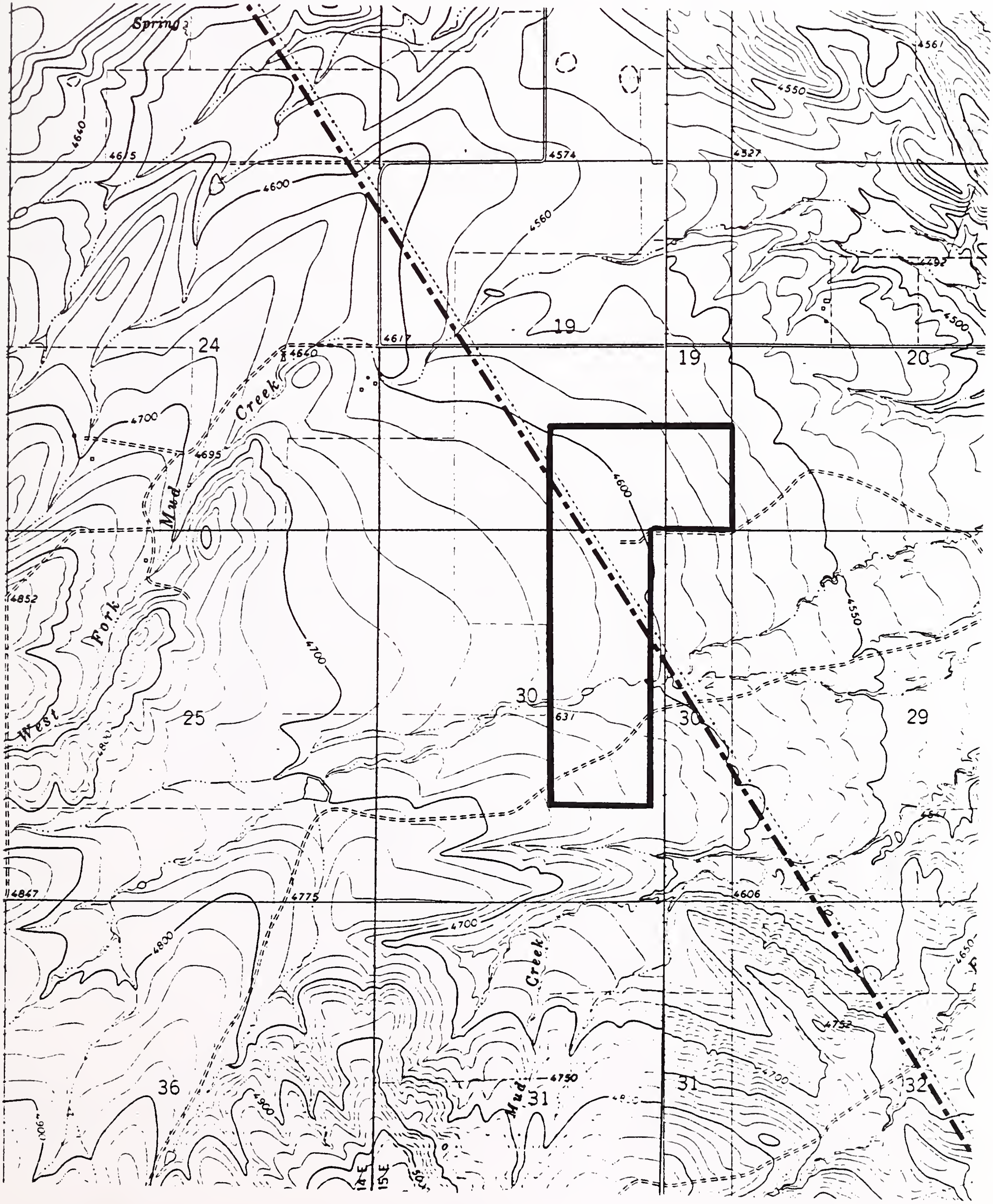
Site 16: Sec. 16, T13N, R14E, JUDITH BASIN COUNTY



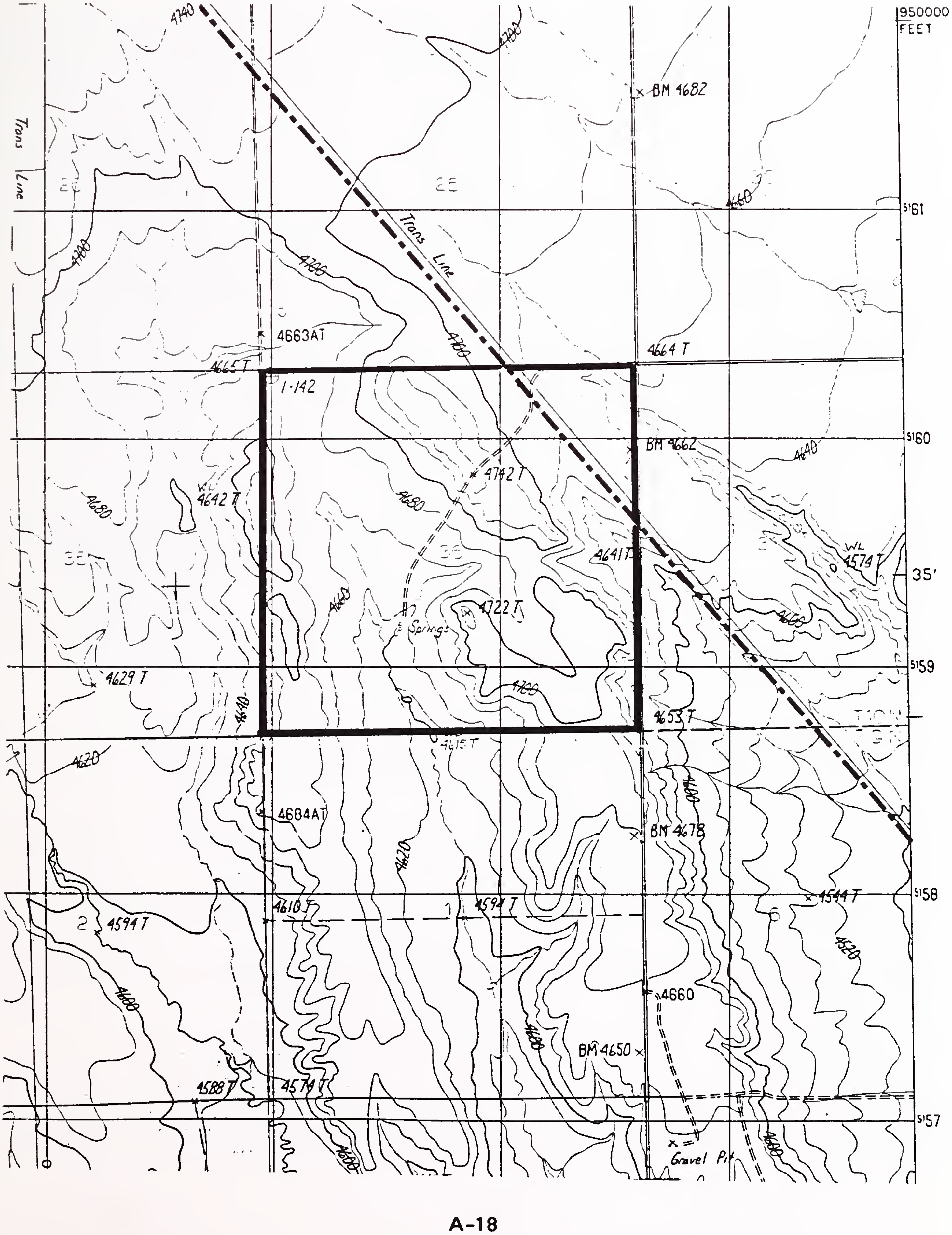
Site 17: Sec. 2, T12N, R14E, JUDITH BASIN COUNTY
Site 18: Sec. 13, T12N, R14E, JUDITH BASIN COUNTY



Site 19: Secs. 19 & 30, T12N, R15E, JUDITH BASIN COUNTY



Site 20: Sec. 36, T10N, R15E, WHEATLAND COUNTY



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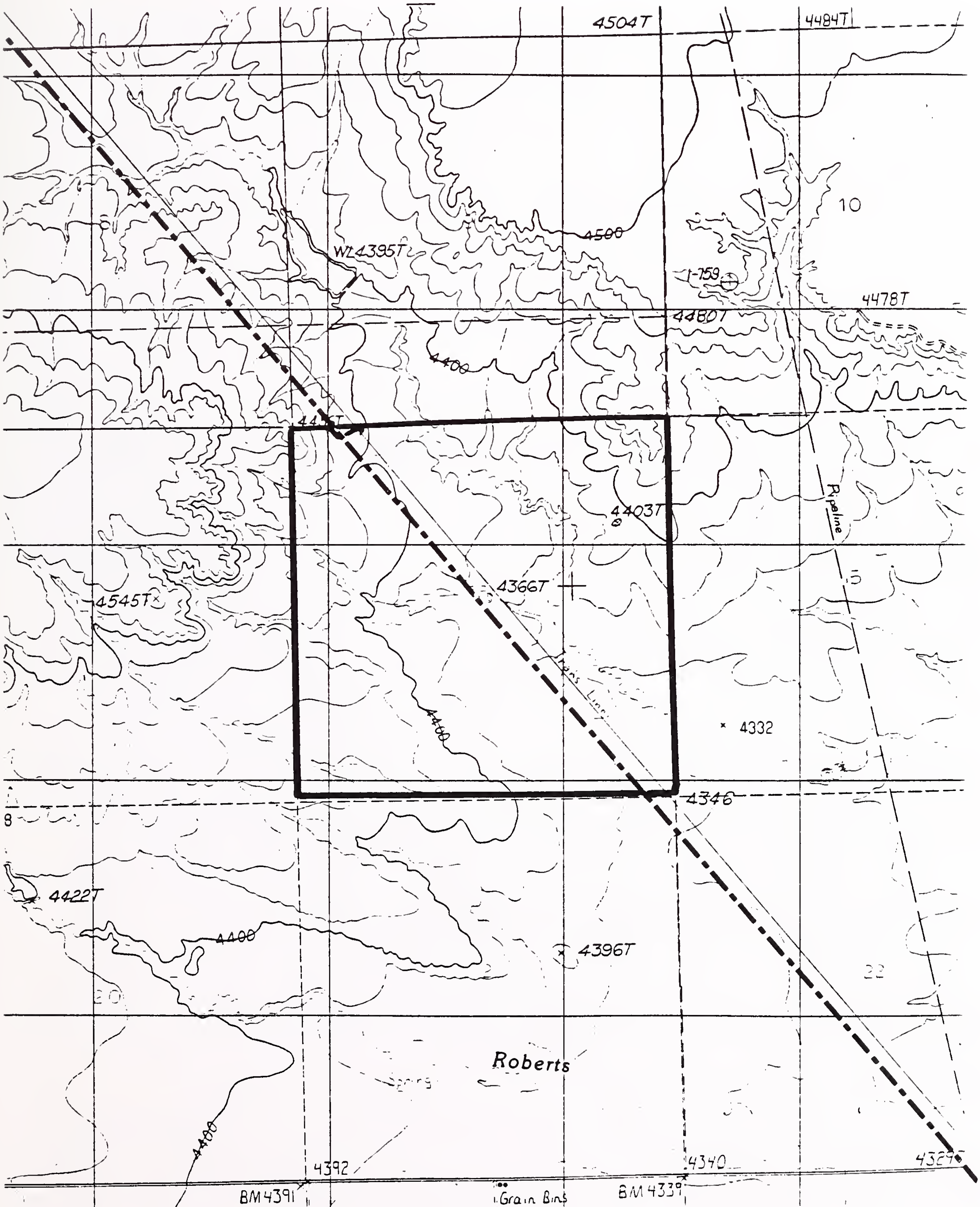

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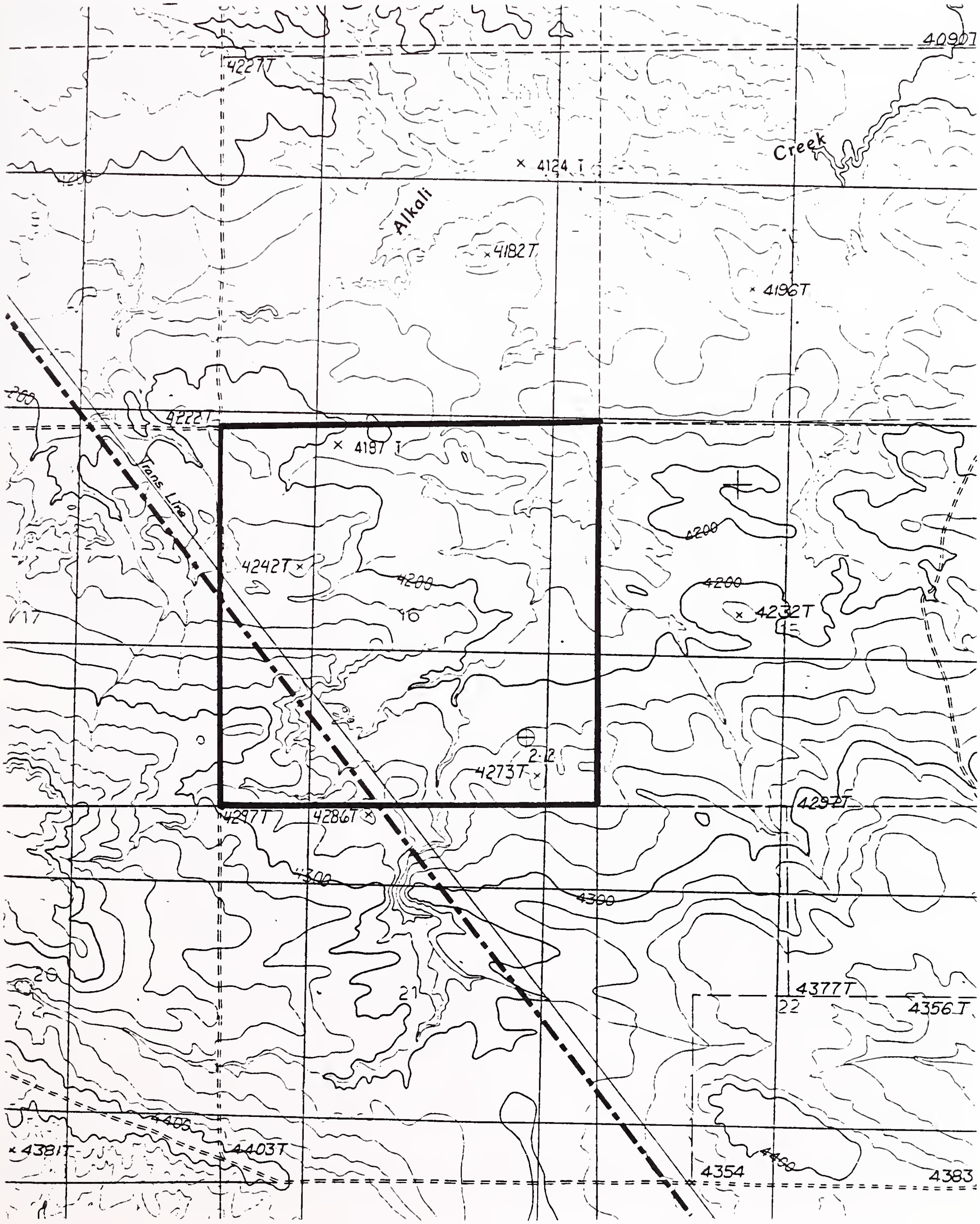
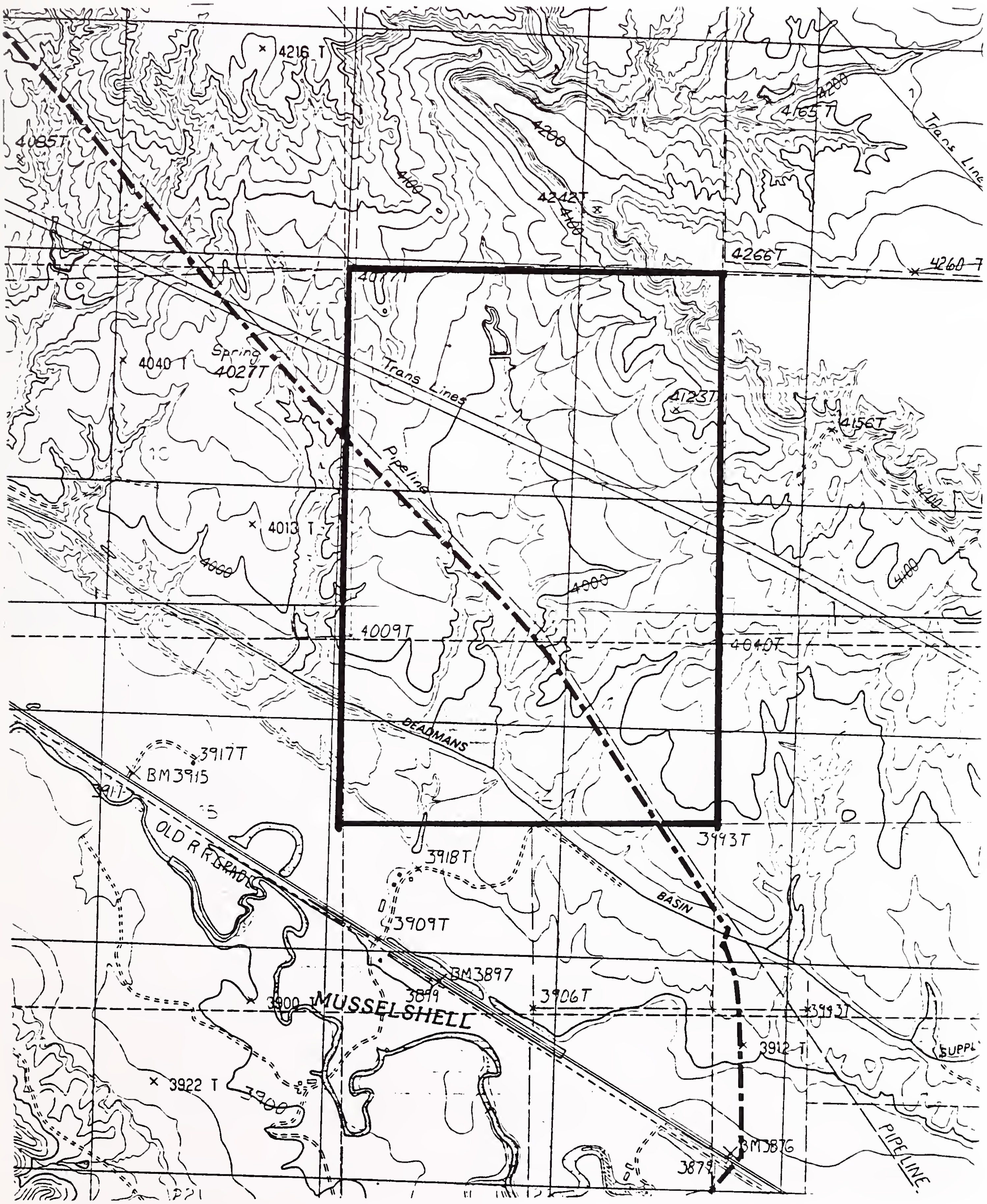
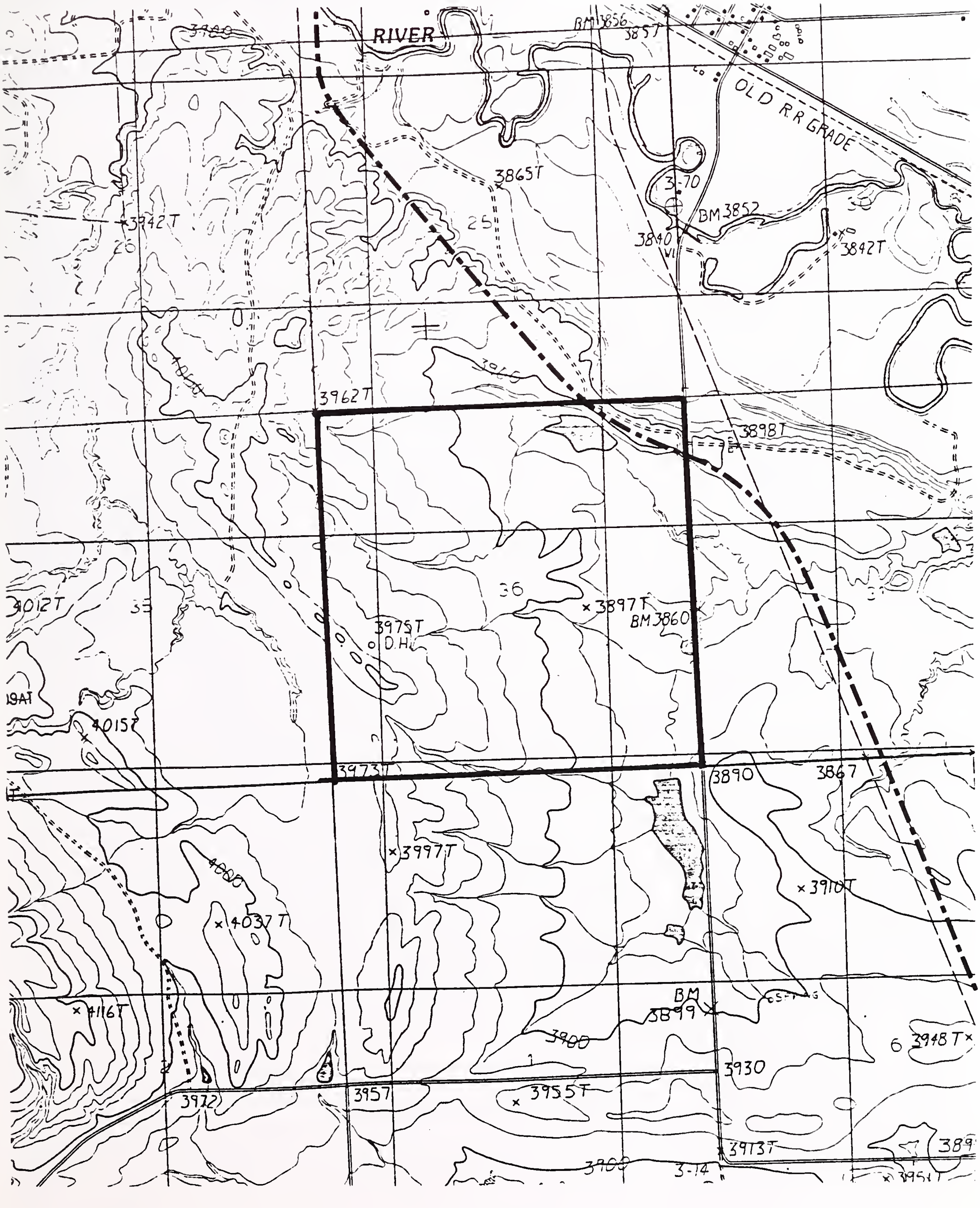


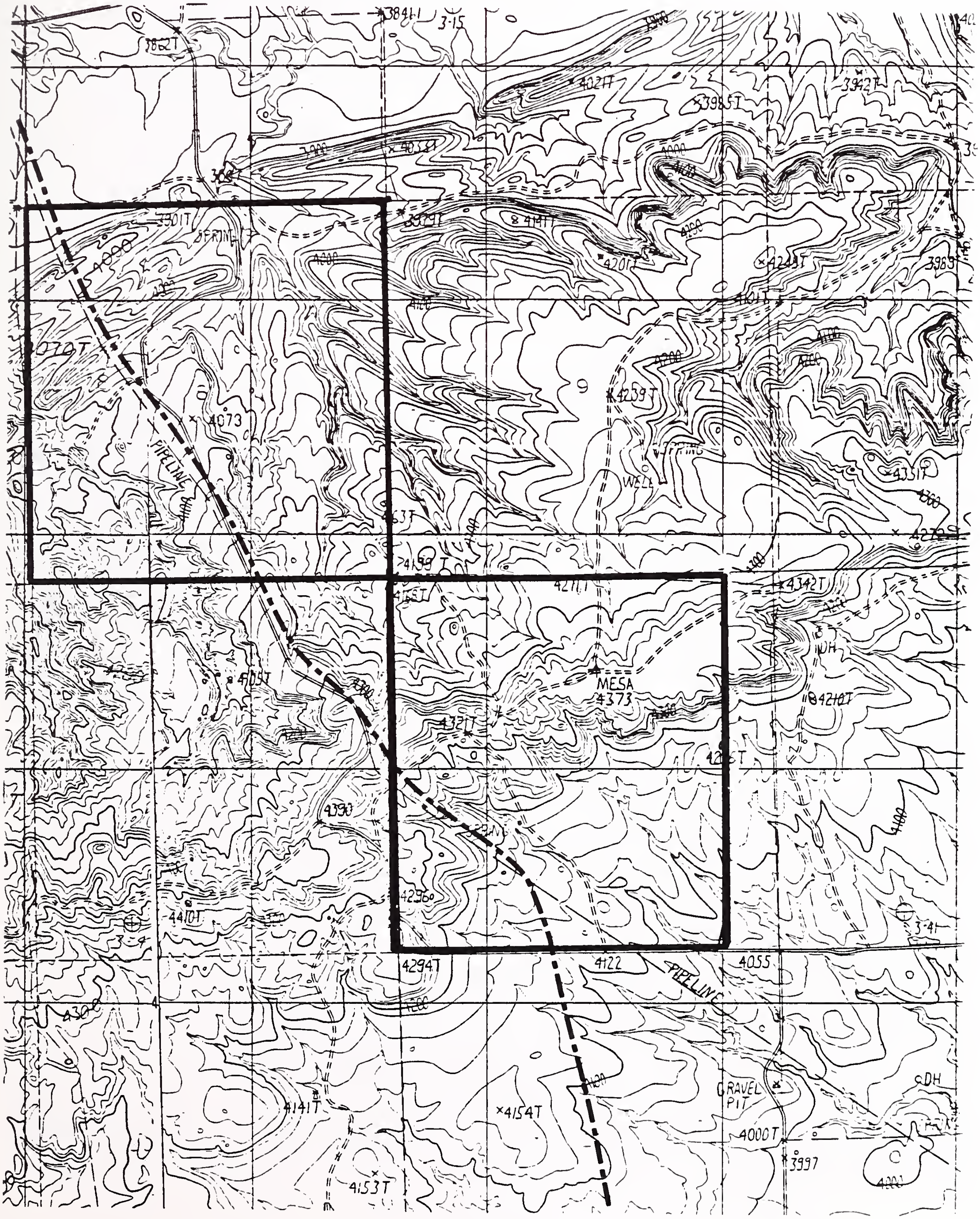
Site 23: Secs. 11 & 14, T7N,R17E, WHEATLAND COUNTY



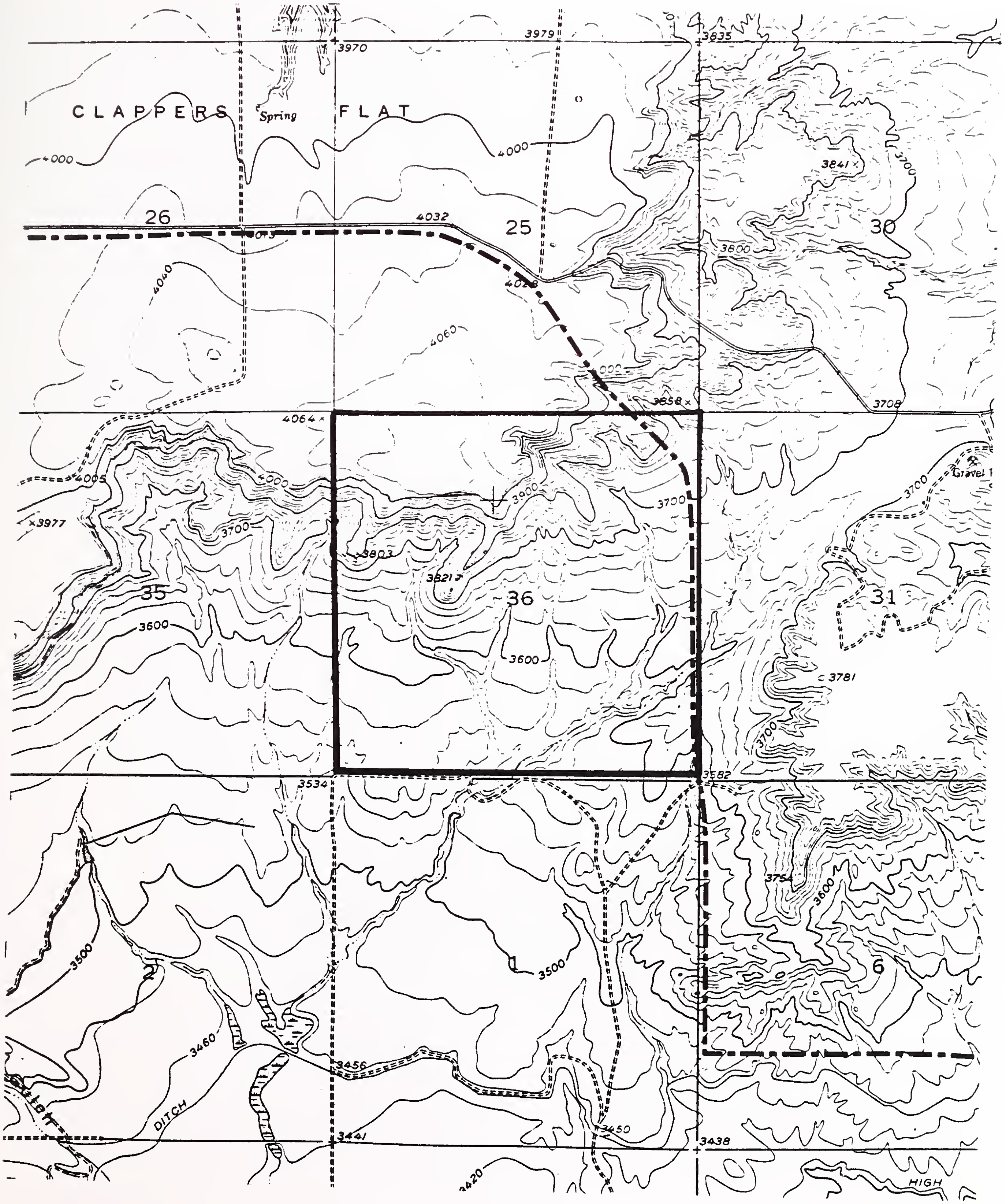
Site 24: Sec. 36, T7N, R17E, WHEATLAND COUNTY



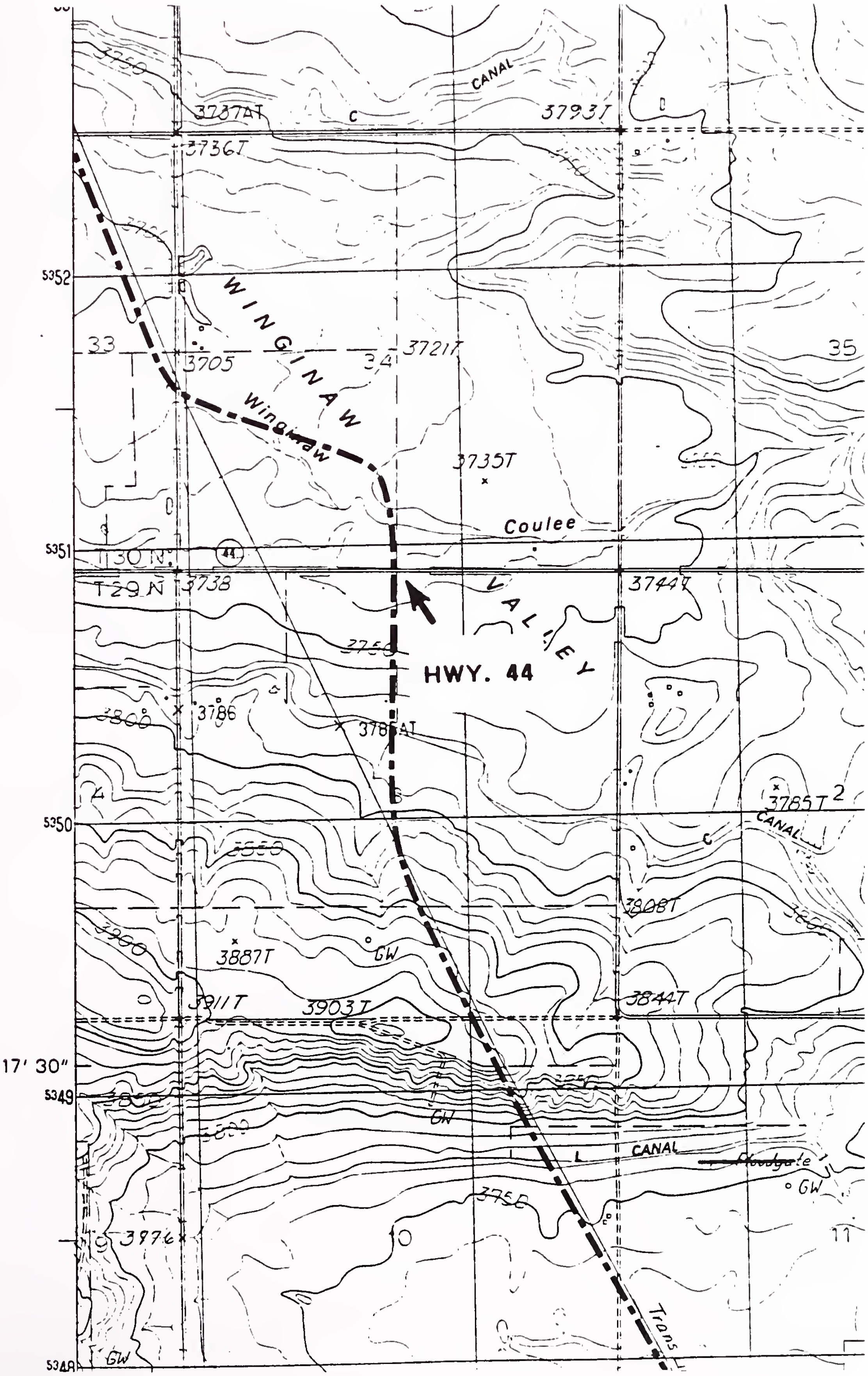
Site 25: Sec. 8, T6N, R18E, WHEATLAND COUNTY
Site 26: Sec. 16, T6N, R18E, WHEATLAND COUNTY



Site 27: Sec. 36, T1S, R23E, YELLOWSTONE COUNTY



Site 29: Sec. 34, T30N, R4W, Sec. 3, T29N, R4W, PONDERA COUNTY



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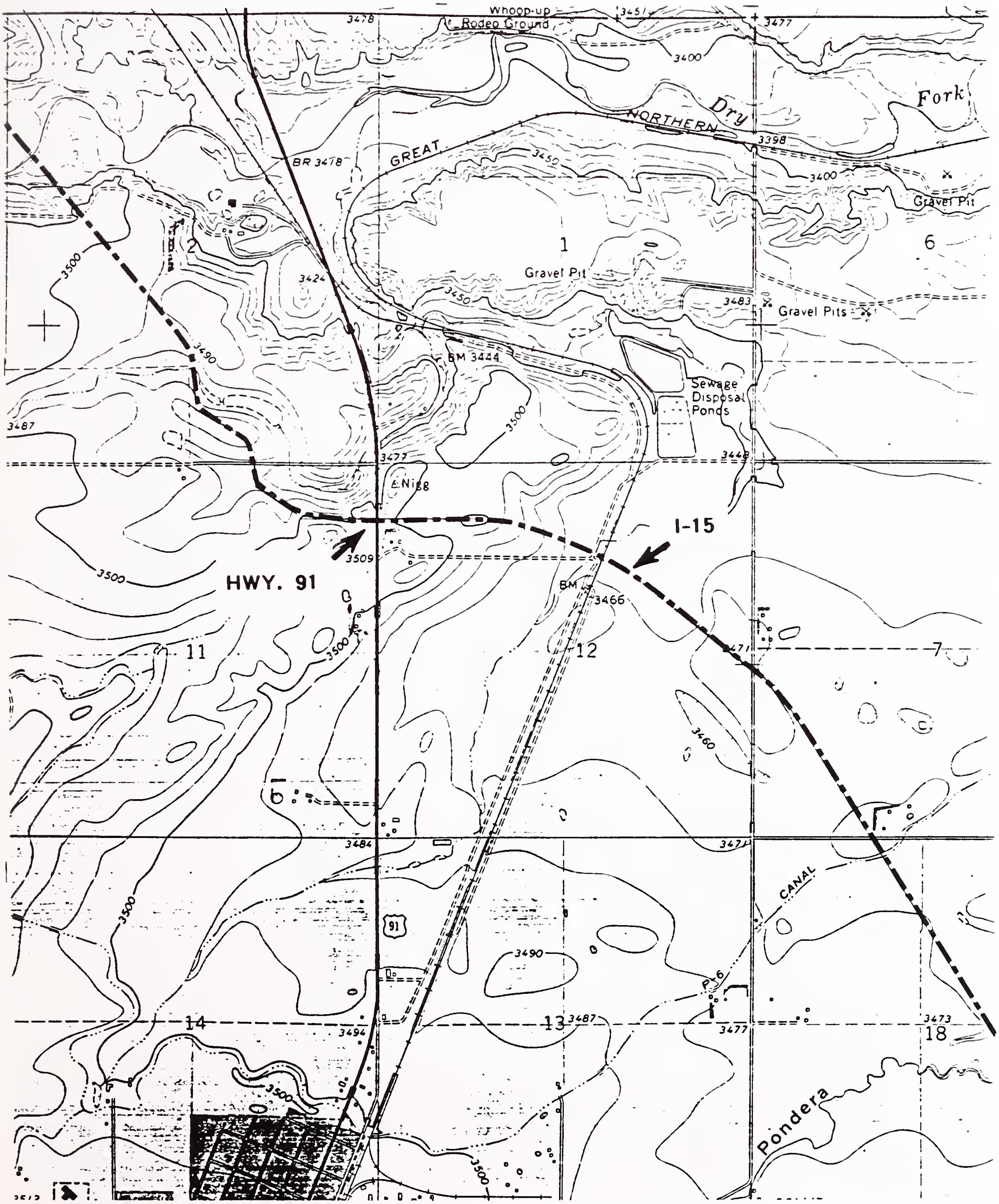
Site 31: Sec. 12, T28N, R3W, PONDERA COUNTY



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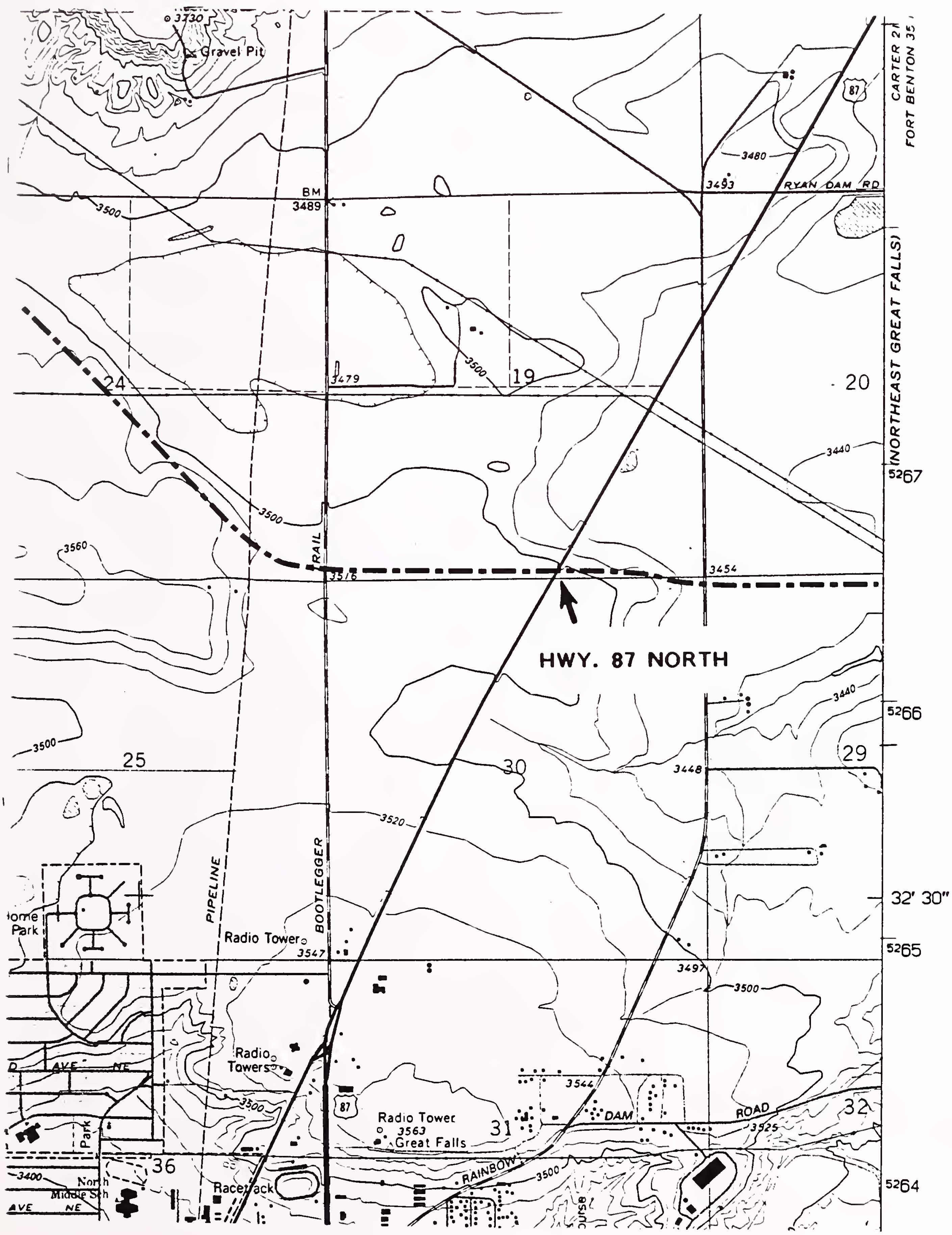

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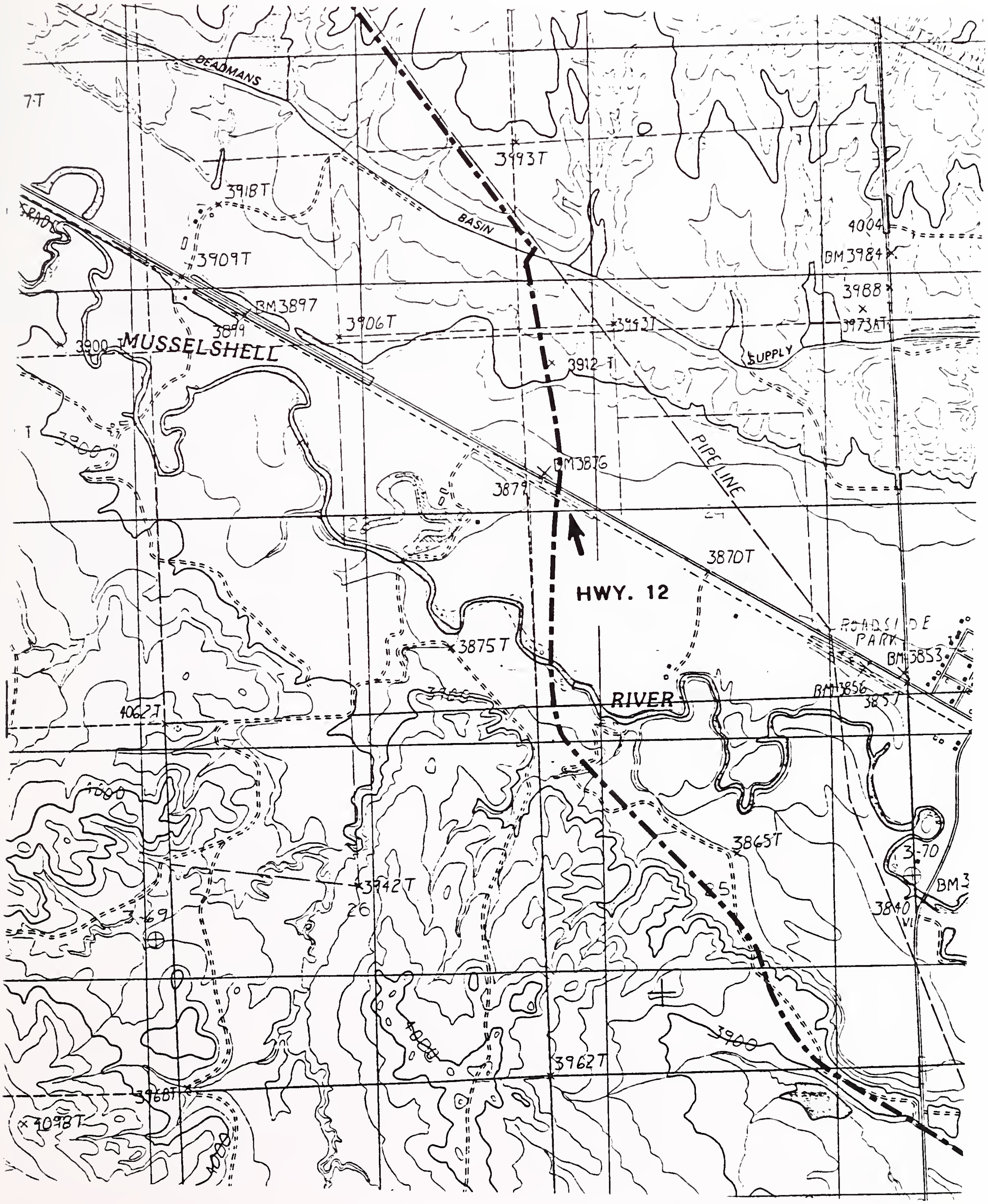

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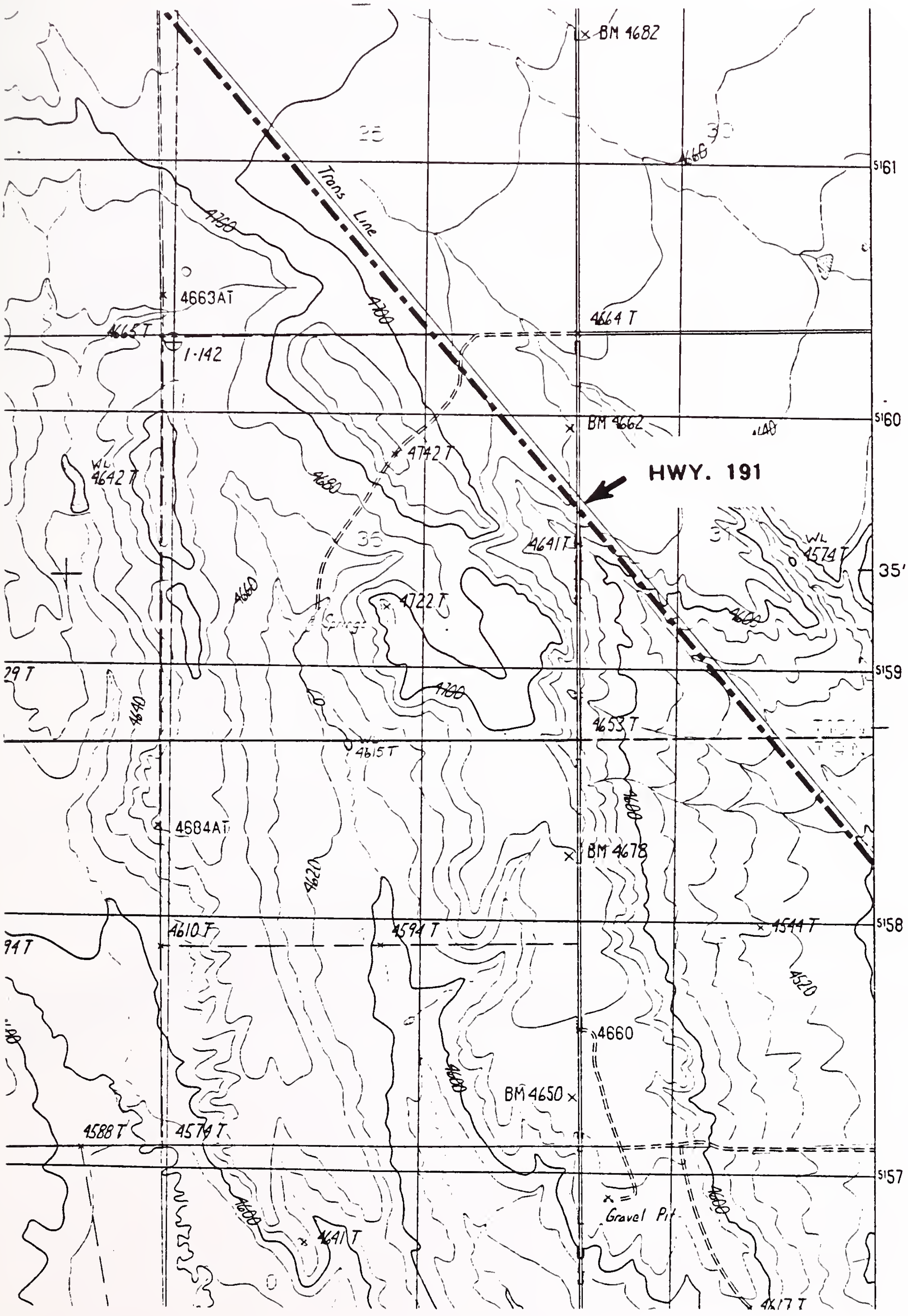
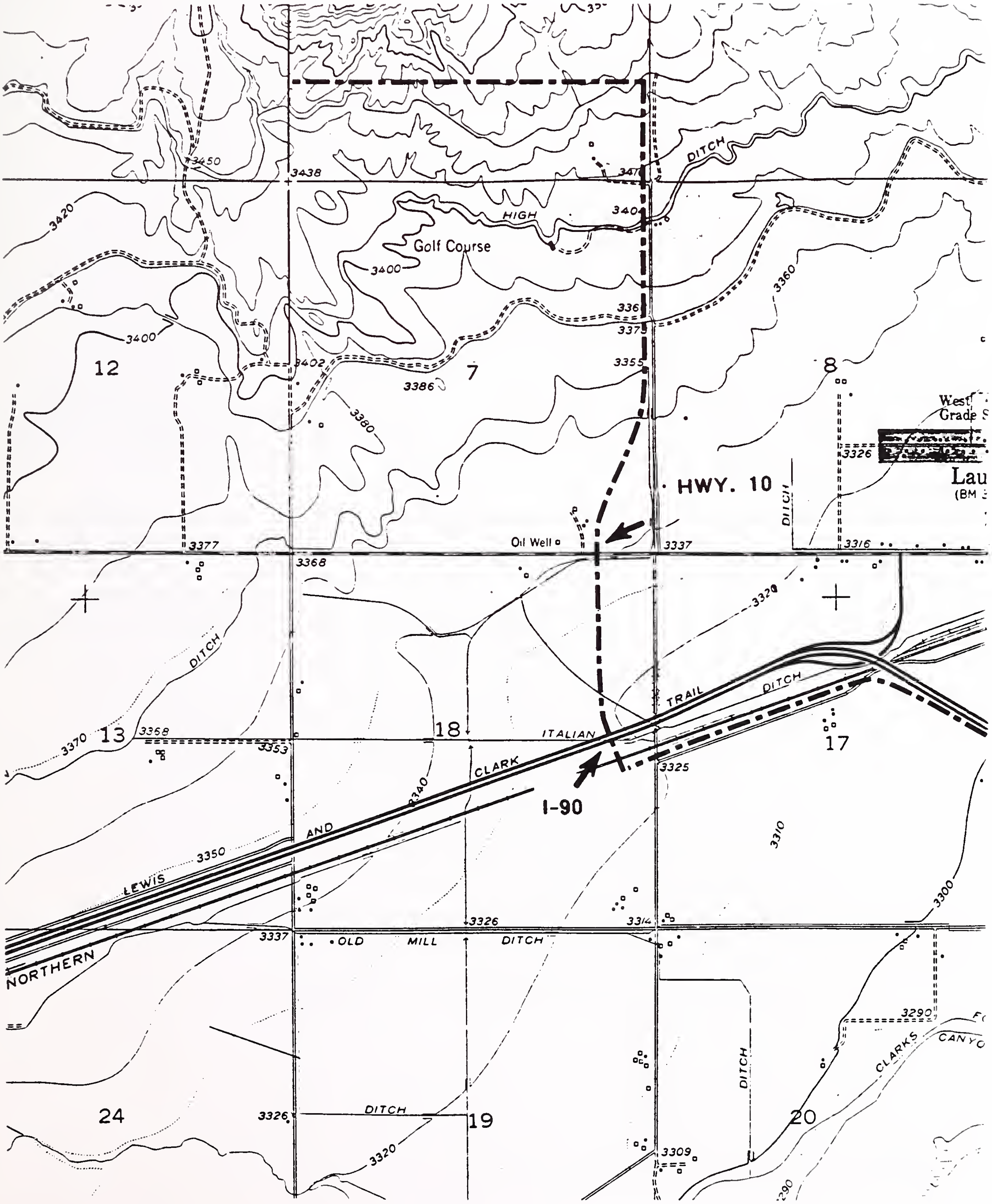
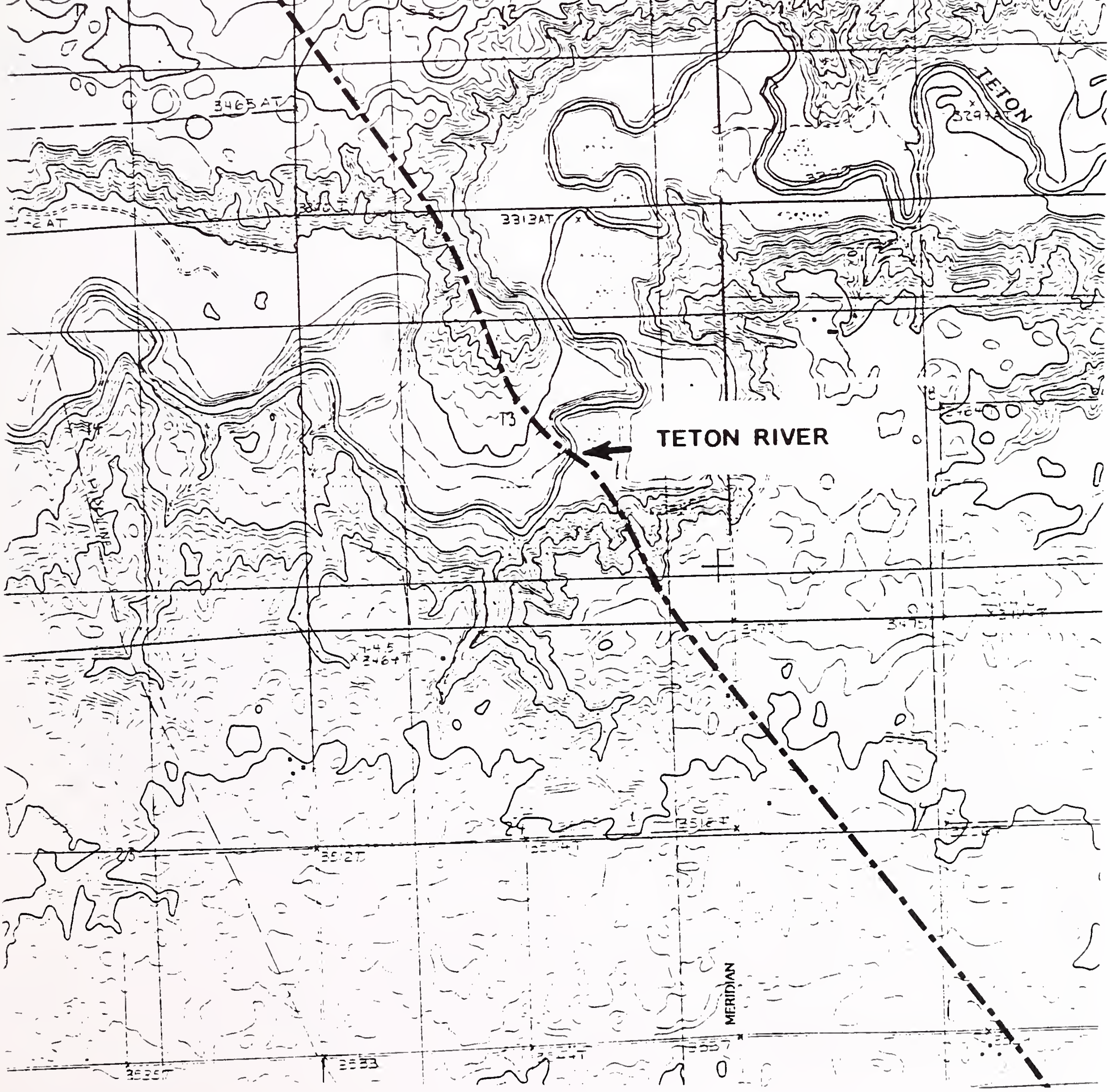


Site 36: Secs. 7 & 18, T2S, R24E, YELLOWSTONE COUNTY
Site 37: Sec. 18, T2S, R24E, YELLOWSTONE COUNTY



Site 39: Sec. 13, T25N, R1W, TETON COUNTY



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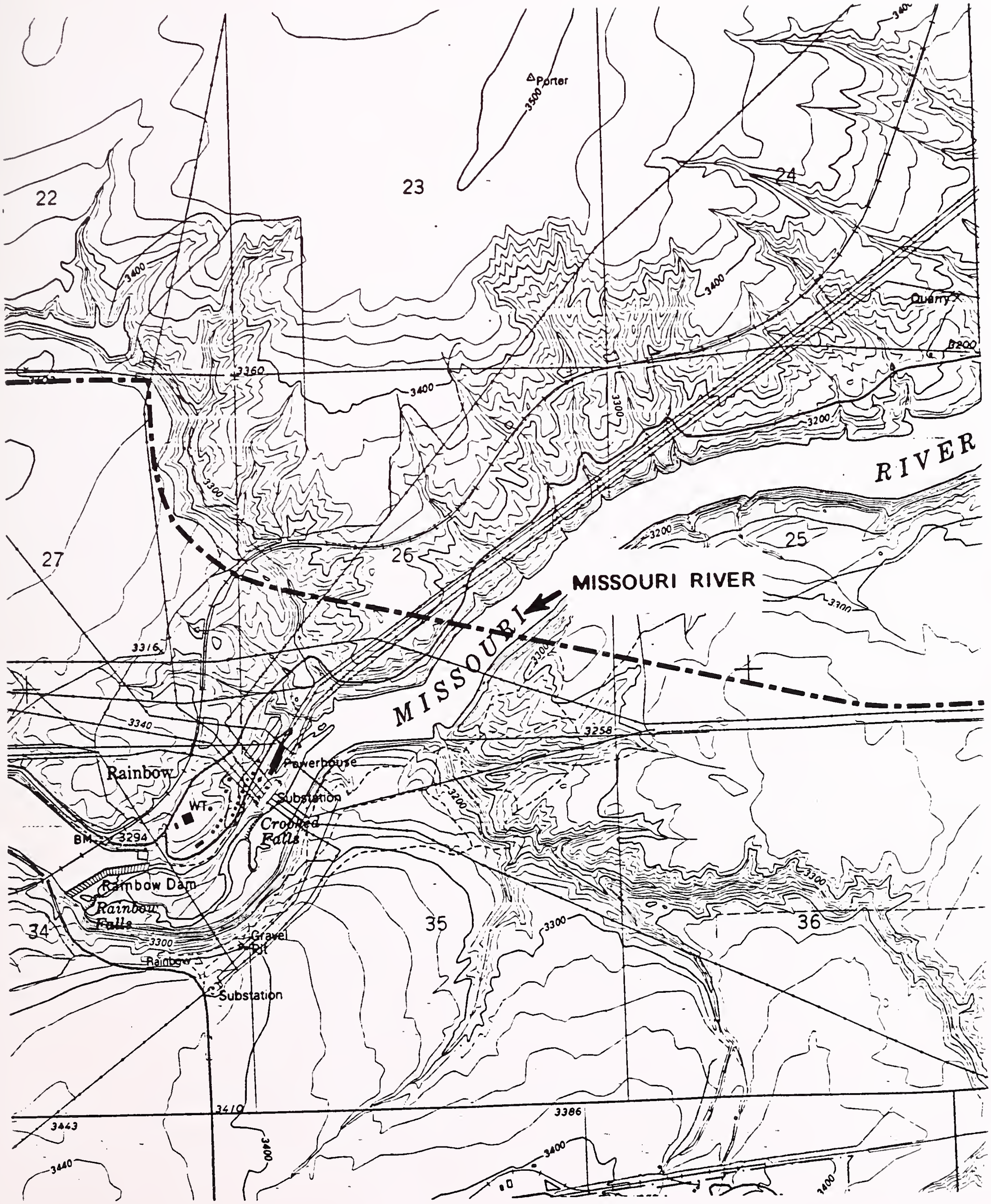

APPENDIX B

Contingency Plan

EMERGENCY PROCEDURES MANUAL
AND
OIL SPILL RESPONSE PLAN

CENEX PIPELINES

AND TERMINALS

P.O. BOX 909

LAUREL, MT 59044-909

CENEX PIPELINES AND TERMINALS
EMERGENCY PROCEDURES MANUAL
AND
OIL SPILL RESPONSE PLAN

A. SUMMARY

A.1 PURPOSE OF MANUAL

A.2 REGULATORY APPLICABILITY

A.3 REVIEW AND UPDATING OF MANUAL

A.4 EMERGENCY CONDITIONS

  A.4.1 FIRE OR EXPLOSION

  A.4.2 ACCIDENTAL SPILLS AND/OR LEAKS

  A.4.3 NATURAL DISASTERS

A.5 OIL SPILL RESPONSE INFORMATION SUMMARY

  A.5.1 OPERATOR NAME AND ADDRESS

  A.5.2 DESCRIPTION OF OIL SPILL RESPONSE ZONES

  A.5.3 QUALIFIED INDIVIDUAL

  A.5.4 PRIMARY OIL SPILL RESPONSE ORGANIZATION

A. SUMMARY

A.1 PURPOSE OF MANUAL

This Emergency Procedures Manual and Oil Spill Response Plan has been prepared by CENEX Pipelines and Terminals for use as a reference resource in responding to emergencies, including oil spills. The purpose of the manual is to provide procedures and resource information necessary to respond promptly and effectively to emergency conditions and to meet the requirements of 49 CFR Part 194, 49 CFR Part 195.402, and the Oil Pollution Prevention Plan requirements of 40 CFR Part 112.

The oil pollution prevention and response elements of this plan apply only to the CENEX Crude Oil Pipeline System and the CENEX Light Products Pipeline System. Separate oil spill plans exist for the Vancouver, Washington; Chippewa Falls, Wisconsin; and McFarland, Wisconsin terminals. In the event of an oil spill at one of those terminals, the oil spill plan for the particular terminal should be consulted.

This manual is not intended to replace judgment. The employee encountering a situation which threatens life or property may be required to decide appropriate immediate actions. Life must be protected before property in these instances.

Only trained personnel are to be used to respond to an emergency condition, as defined in Section E.1 of this manual. It is intended that the personnel using this manual be trained on the equipment and procedures necessary for handling an emergency situation.

A copy of this manual shall be located at the main office in Laurel, Montana, at all staffed facilities and at each pump station within a response zone. A complete listing of the distribution for this manual can be obtained at the Laurel, Montana, office.

A.2 REGULATORY APPLICABILITY

Transportation of Hazardous Liquids by pipeline is regulated by the U.S. Department of Transportation (DOT). Pipeline safety regulations are administered by the Research and Special Programs Administration (RSPA). Pipeline safety regulations for transportation of

hazardous liquids are found at 49 CFR Part 195. Except as provided in the rule, Part 195 applies to pipeline facilities and the transportation of hazardous liquids or carbon dioxide associated with those facilities in or affecting interstate or foreign commerce, including pipeline facilities on the Outer Continental Shelf.

Section 402 of Part 195 requires that each operator prepare and follow for each pipeline system a manual of written procedures for handling emergencies. 49 CFR 195.402(e) further specifies that the manual must include procedures for the following to provide safety when an emergency condition occurs:

1. Receiving, identifying, and classifying notices of events which need immediate response by the operator of notice to fire, police, or other appropriate public officials and communicating this information to appropriate operator personnel for corrective action.
2. Prompt and effective response to a notice of each type emergency, including fire or explosion occurring near or directly involving a pipeline facility, accidental release of hazardous liquid or carbon dioxide from a pipeline facility, operational failure causing a hazardous condition, and natural disaster affecting pipeline facilities.
3. Having personnel, equipment, instruments, tools, and material available as needed at the scene of an emergency.
4. Taking necessary action, such as emergency shutdown or pressure reduction, to minimize the volume of hazardous liquid or carbon dioxide that is released from any section of a pipeline system in the event of a failure.
5. Control of released hazardous liquid or carbon dioxide at an accident scene to minimize the hazards, including possible intentional ignition in the cases of flammable highly volatile liquid.

6. Minimization of public exposure to injury and probability of accidental ignition by assisting with evacuation of residents and assisting with halting traffic on roads and railroads in the affected area, or taking other appropriate action.
7. Notifying fire, police, and other appropriate public officials of hazardous liquid or carbon dioxide pipeline emergencies and coordinating with them preplanned and actual responses during an emergency, including additional precautions necessary for an emergency involving a pipeline system transporting a highly volatile liquid.
8. In the case of failure of a pipeline system transporting a highly volatile liquid, use of appropriate instruments to assess the extent and coverage of the vapor cloud and determine the hazardous area.
9. Providing for a post accident review of employee activities to determine whether the procedures were effective in each emergency and taking corrective action where deficiencies are found.

In addition to pipeline safety regulations, the Federal Water Pollution Control Act, as amended by the Oil Pollution Act of 1990 (OPA 90) mandated that owners or operators of certain oil handling/storage facilities prepare a plan for responding to a worst case discharge of oil or a hazardous substance. The requirement applies to facilities which, because of their location, could reasonably be expected to cause "substantial harm" or "significant and substantial harm" to the environment by discharging oil into or on navigable waters, adjoining shorelines or the exclusive economic zone. Plans must be submitted by February 18, 1993 and owners/operators must operate in compliance with the plan by August 18, 1993.

OPA 90 required that appropriate Federal agencies promulgate regulations which establish rules for the preparation and review of response plans. On January 5, 1993 RSPA promulgated an interim final rule entitled "Response Plans for Onshore Oil Pipelines" (49 CFR Part 194). With only minor exceptions, the rule applies to all oil pipelines, whether or not such pipelines are exempt from the pipeline safety regulations at 40 CFR Part 195.

In addition to RSPA applicability, the U.S. Environmental Protection Agency (EPA) has authority over certain pipeline terminals for various environmental requirements, including oil spill response plans. EPA incorporated oil spill response plan regulations within existing oil pollution prevention regulations found at 40 CFR Part 112.

A.3 REVIEW AND UPDATING OF MANUAL

RSPA requires that emergency procedures manuals be reviewed once each calendar year, at intervals not exceeding fifteen (15) months (49 CFR Part 195.402(a)).

Per 49 CFR Part 194.121, oil spill response plans shall be reviewed at least every three (3) years from the date of submission and modified to address new or different operating conditions or information included in the plan. Also, if new or different operating conditions or information would substantially affect the implementation of a response plan, the operator must immediately modify its response plan to address such change and, within thirty (30) days of making such change, submit the change to RSPA. Examples of changes in operating conditions that would cause a significant change to an operator's response plan are given at 49 CFR Part 194.121(b), and include:

- An extension of the existing pipeline or construction of a new pipeline;
- Relocation or replacement of a pipeline that substantially affects the information included in the response plan, such as a change to the worst case discharge volume;
- A change in the type of oil transported in the pipeline;
- Changes in the Oil Spill Response Organizations;
- Changes to emergency response procedures;
- A change in the Qualified Individual;
- Changes in the NCP/ACP that have significant impact on the appropriateness of response equipment or response strategies;
- A change in ownership; and

- Any other information relating to circumstances that may affect full implementation of the plan.

This manual shall be reviewed and updated in accordance with the above requirements.

A.4 EMERGENCY CONDITIONS

An emergency is any condition which results in the increase in potential for loss to the company and/or individuals. Emergency conditions may be caused by natural forces, equipment malfunctions, or operator error, including breakdown in communications and deviation from standard operating procedures.

A.4.1 FIRE OR EXPLOSION

Any fire or explosion directly involving a pipeline or terminal facility will be considered an emergency condition. A fire or explosion which occurs close enough to a pipeline or terminal facility to be an immediate threat to the facility will be considered an emergency situation.

A.4.2 ACCIDENTAL SPILLS AND/OR LEAKS

Any release of hazardous vapors or liquids in sufficient quantities to pose a threat to personnel, public, property, or the environment will be considered an emergency situation.

A.4.3 NATURAL DISASTERS

Natural disasters such as hurricanes or tornadoes which could effect the safe operation of the pipeline(s) or terminal(s) will be considered an emergency situation. Acts of sabotage or threats of sabotage (such as bomb threats) will be considered an emergency situation.

A.5 OIL SPILL RESPONSE INFORMATION SUMMARY

A.5.1 OPERATOR NAME AND ADDRESS

CENEX, INC.
Pipelines, Terminals and Residual Marketing
803 Highway 212 South
Post Office Box 909
Laurel, Montana 59044

A.5.2 DESCRIPTION OF OIL SPILL RESPONSE ZONES

A response zone is defined as (49 CFR Part 194.5):

> A geographic area either along a length of pipeline or including multiple pipelines, containing one or more adjacent line sections, for which the operator must plan for the deployment of, and provide spill response capabilities.

The following oil spill response zones are covered under this plan (see Section D for detailed response zone and response resource information).

Response Zone	Description
1	CENEX Northern-Montana crude oil gathering and transmission system, (Glacier County, Pondera County, Toole County and Liberty County, Montana).
2	CENEX light products pipeline system beginning at Laurel, Montana, and extending to Block Valve 60, located in North Dakota, approximately 2¼ miles east of the Montana-North Dakota border. (Montana Counties: Yellowstone, Treasure, Rosebud, Custer, Prairie, Dawson, Richland; and McKenzie County, North Dakota.) This response zone includes the Glendive, Montana Terminal.
3	CENEX light products pipeline system, beginning at Block Valve 60, located approximately 2¼ miles east of the Montana-North Dakota border, and extending to the Fargo, North Dakota Station. (North Dakota Counties: Cass, Eddy, Foster, Griggs, McHenry, McKenzie, Mountrail, Pierce, Ward and Wells). This response zone includes the Minot, North Dakota Terminal.

A.5.3 QUALIFIED INDIVIDUAL

The Qualified Individual is an English-speaking representative of an operator, located in the United States, available on a 24-hour basis, with full authority to: activate and contract with required oil spill response organization(s); activate personnel and equipment maintained by operator; act as liaison with the Federal On-Scene Coordinator (FOSC); and obligate any funds required to carry out all required or directed oil response activities (49 CFR Part 194.5).

Designated Qualified Individual (All Response Zones)

Dave Waddell	24 Hr.:	1-800-421-4122
Director, Pipelines, Terminals and Residual Marketing	Office:	406-628-5200
	Home:	406-633-2435
Laurel, Montana	Nye Cabin:	406-328-6316
Alternate:		
S. Michel Stahly	24 Hr.:	1-800-421-4122
Manager, Environmental, Health & Safety	Office:	406-628-5200
CENEX Pipeline & Terminals	Home:	406-652-3909
Laurel, Montana		

A.5.4 PRIMARY OIL SPILL RESPONSE ORGANIZATION

The Primary Oil Spill Response Organization (OSRO) for the response zones represented by this Oil Spill Response Plan is:

Superior Environmental Services, Inc.

24-hour Emergency Response	1-800-688-4005 414-458-6030

B. EMERGENCY PROCEDURES

B.1 EMERGENCY NOTIFICATION AND RESPONSE
  B.1.1 FIRST RESPONDER AWARENESS LEVEL
  B.1.2 FIRST RESPONDER OPERATIONS LEVEL
  B.1.3 EMERGENCY COORDINATOR RESPONSE
  B.1.4 QUALIFIED INDIVIDUAL RESPONSE
  B.1.5 OPERATIONS MANAGER RESPONSE
  B.1.6 ADDITIONAL MANAGEMENT RESPONSE POSITIONS
B.2 ADDITIONAL EMERGENCY PROCEDURES
  B.2.1 SITE SECURITY AND CONTROL
  B.2.2 FIRES OR EXPLOSIONS
  B.2.3 SPILLS AND/OR LEAKS
  B.2.4 GAS EVALUATION AND RESPONSE
  B.2.5 REPAIRS AND CLEANUP
  B.2.6 TORNADOES
  B.2.7 SEVERE THUNDERSTORMS
  B.2.8 EARTHQUAKES
  B.2.9 TELEPHONE BOMB THREATS
  B.2.10 POST-ACCIDENT REVIEW

B. EMERGENCY PROCEDURES

B.1 EMERGENCY NOTIFICATION AND RESPONSE

In response to an emergency, the CENEX Emergency Coordinator will assume the role of Incident Commander in charge of a site-specific Incident Command system (ICS). The ICS is an organized approach to effectively control and manage operations at an emergency incident. Emergency responders and their communications will be coordinated and controlled through the Emergency Coordinator in charge of the ICS. Based on the conditions present, the Emergency Coordinator will implement appropriate emergency operations. The command post will be established at the nearest CENEX Terminal, as outlined in Appendices C, D and E. Involvement of the Federal On-Scene Coordinator (FOSC), the State On-Scene Coordinator (SOSC), local government authorities, and Oil Spill Response Organizations (OSROs) will be coordinated under a unified command structure with the Emergency Coordinator. The EPA is the designated FOSC for inland zones. The FOSC will consult with the Regional Response Team.

Upon notification of a spill, designated CENEX personnel will initiate containment actions. The Emergency Coordinator will notify CENEX personnel to form the spill management team. CENEX personnel from the nearest terminal; Laurel, Montana office; and St. Paul, Minnesota office will be delegated spill management responsibilities. The team members will assist in directing and administering incident control and cleanup operations, coordinating with the appropriate governmental and regulatory officials, and handling inquiries and claims. The depth of the team will depend on the magnitude of the spill. The minimum team organizational structure will include Command, which is delegated to the Emergency Coordinator and Qualified Individual; and Operations, which is delegated to the Operations Manager. For larger spills or as conditions warrant, the structure will be expanded to include Planning; Logistics; and Administration and Finance. OSRO personnel may also be delegated spill management responsibilities.

As outlined in the response zone Appendices C, D and E, CENEX and cooperative response equipment will be mobilized and deployed by CENEX personnel. As needed, OSRO personnel and equipment will be mobilized to the spill site. OSRO personnel will assist in containment, recovery and cleanup operations.

B.1.1 FIRST RESPONDER AWARENESS LEVEL

First Responders Awareness Level are persons who are likely to witness or discover a hazardous substance release and who have been trained to initiate the emergency response sequence by notifying the proper authorities of the release. Awareness Level First Responders have not received adequate training to conduct spill mitigation and response activities. They are to take no further action beyond notifying the proper authorities.

Upon discovery of an emergency situation, the CENEX First Responder Awareness Level is to take the following actions:

1. Take immediate actions necessary to preserve life if safe to do so.
2. Notify the Terminal Superintendent or other Emergency Coordinator.
3. Notify CENEX operators that may be at the terminal.
4. Notify Laurel, Montana Dispatcher at:

24 Hours/Day	1-800-421-4122
Business Hours	406-628-5200

5. Provide information required for the Emergency Response Report Form in Appendix A.
6. Stand by to assist Terminal Superintendent or other Emergency Coordinator.

B.1.2 FIRST RESPONDER OPERATIONS LEVEL

First responders at the operations level are individuals who respond to releases or potential releases of hazardous substances as part of the initial response to the site for the purpose of protecting nearby persons, property, or the environment from the effects of the

release. They are trained to respond in a defensive fashion, i.e., they are to contain the release, keep it from spreading, and prevent exposures.

In an emergency situation, CENEX terminal/pipeline operators designated for emergency response are to take the following actions as appropriate and if possible.

1. Take appropriate actions necessary to minimize the volume of hazardous liquid being released and contain released materials.
2. Notify the Terminal Superintendent or other Emergency Coordinator.
3. Provide information required for the Emergency Response Report Form in Appendix A.
4. Stand by to assist Terminal Superintendent or other Emergency Coordinator.

B.1.3 EMERGENCY COORDINATOR RESPONSE

At a terminal, the Terminal Superintendent is designated as the Emergency Coordinator. At other locations, the Emergency Coordinator will be either the Terminal Superintendent for the terminal closest to the response location, the Environmental, Health and Safety Supervisor, or other CENEX employees appointed by the Qualified Individual.

For the purpose of this plan, the term Emergency Coordinator is synonymous with the terms On-Scene Coordinator, Incident Commander, and facility spill response coordinator. The Emergency Coordinator is responsible for initiating onshore spill response coordination and maintaining this plan.

Emergency Coordinator Responsibilities:

1. Activate internal alarms and hazard communications systems to notify facility personnel.
2. Notify local fire department, if necessary.
3. In consultation with the Qualified Individual, activate contract personnel, including OSROs, for immediate response.

4. Identify the character, exact source, amount, and extent of the release, as well as the other items required on the Emergency Response Report Form.
5. Under the direction of the Qualified Individual, notify and provide information to the appropriate Federal, State and local authorities with designate response roles.
6. In consultation with the CENEX safety officer, assess the interaction of a released substance with water and/or other substances stored at the terminal and notify response personnel of specific precautions.
7. In consultation with the CENEX safety officer, assess the possible hazards to human health and the environment due to the emergency. This assessment must consider both direct and indirect effects of the release (i.e. the effects of any flammable, toxic, irritating or asphyxiating gasses that may be generated, or the effects of any hazardous surface water runoff from water used to control fires and heat-induced explosions).
8. Assess and implement prompt removal actions to contain and remove substance released.
9. Coordinate rescue and response actions.
10. Obtain authority from the Qualified Individual to immediately access company funding to initiate cleanup activities.
11. Direct spill response and cleanup activities.
12. Issue follow-up notifications to applicable Federal, state or local authorities using the Emergency Response Report Form. Circumstances which may necessitate follow-up notifications include: changes in oil spill conditions, updates on the status of response actions, or advice on health risks.

Emergency Coordinator Immediate Response Procedures:

1. Implement the Emergency Procedures Manual and Oil Spill Response Plan.
2. Verify that appropriate immediate response actions were taken, such as:

    a. Closing of terminal or pipeline valves;
    b. Emergency shutdown;
    c. Pressure reductions;
    d. Controlling the release of hazardous vapors.

3. Contact the Qualified Individual.
4. Give instructions to the employee at the site or dispatch an employee to verify the situation.
5. Call for appropriate additional assistance if needed:

    Fire, police, ambulance 911

6. Contact oil spill removal organizations directly if needed. Notification of requested contract assistance must be made within thirty (30) minutes of the discovery of a worst case oil discharge or substantial threat of such a discharge.
    a. Primary Response Contractor;
    b. Additional cleanup/repair subcontractors.
7. Verify that Emergency Response Report Form information has been collected (Appendix A).

B.1.4 QUALIFIED INDIVIDUAL RESPONSE

The Qualified Individual is a CENEX management employee located in Laurel, Montana; speaks fluent English; is available on a 24-hour basis; is able to arrive at the terminal within a reasonable time; and is familiar with implementation of this plan. The Qualified Individual has full authority to activate and engage contract emergency response services, obligate funds to carry out necessary or directed response activities, and act as liaison with the Federal On-Scene Coordinator, State On-Scene Coordinator, and government agencies.

Immediate Response Procedures:

1. Medical assistance.

2. Fire department.
3. Dispatcher for:
    a. Immediate response;
    b. Repair crews;
    c. Transportation.
4. Contact oil spill removal organizations if needed. Notification of requested contract assistance must be made within thirty (30) minutes of the discovery of a worst case oil discharge or substantial threat of such a discharge.
    a. Primary Response Contractor;
    b. Additional cleanup/repair subcontractors.
5. Regulatory Agencies:
    a. National Response Center (DOT/EPA/USCG);
    b. Any additional agencies believed to be necessary (See "Telephone Contact Lists").
6. Law enforcement for:
    a. Traffic control;
    b. Crowd control;
    c. Road blocks;
    d. Evacuation of residents.
7. Railroads.
8. Utility companies:
    a. Electric;
    b. Gas;
    c. Telephone;
    d. Other utilities which may be effected.
9. Notify downstream water users.
10. Disseminate information to the public.

Designated Qualified Individual:

Dave Waddell	24 Hr.:	1-800-421-4122
Director, Pipelines, Terminals & Residual Marketing	Office:	406-628-5200
Laurel, Montana	Home:	406-633-2435
	Nye Cabin	406-328-6316

Alternate:		
S. Michel Stahly	24 Hr.:	1-800-421-4122
Manager, Environmental, Health & Safety	Office:	406-628-5200
CENEX Pipeline & Terminals	Home:	406-652-3909
Laurel, Montana		

B.1.5 OPERATIONS MANAGER RESPONSE

In an emergency situation, the Operations Manager is to take the following actions as requested by the Qualified Individual:

1. Assist with regulatory notifications.
2. Designate CENEX personnel and equipment from Laurel, Montana to respond to the terminal.
3. Assume control over terminal transfer operations, including rescheduling pipeline and truck transfers.
4. Coordinate spill response operations as requested by the Emergency Coordinator.

Designated Operations Managers:

Richard Lohof	Office:	406-628-5200
Manager, CENEX Pipelines & Terminals	Home:	406-628-7862
Laurel, Montana	Cellular:	406-698-5884

Mick Gee	Office:	406-628-5200
Manager, Engineering	Home:	406-656-1179
CENEX Pipeline & Terminals		
Laurel, Montana		

Jacob Seel	Office:	406-628-5200
Supervisor of Operations	Home:	406-652-3019
CENEX Pipelines & Terminals	Cellular:	406-698-5884
Laurel, Montana		

B.1.6 ADDITIONAL MANAGEMENT RESPONSE POSITIONS

Planning Manager

The Planning Manager is responsible for consolidating concerns of the members of the unified command into joint planning recommendations and specific long-range strategic plans. The Manager also develops short-range tactical plans for the operations division.

Logistics Manager

The Logistics Manager is responsible for providing the necessary support for both short-term and long-term action plans and interfacing with the media.

Administration and Finance Manager

The Administration and Finance Manager is responsible for documenting daily expenditures of the spill management team, providing cost estimates for continuing operations, and providing legal advice and assistance.

B.2 ADDITIONAL EMERGENCY PROCEDURES

B.2.1 SITE SECURITY AND CONTROL

The Emergency Coordinator will only allow emergency response personnel and persons who are actively performing emergency operations at the emergency site. Traffic may be controlled by manning main gates at the terminal or access roads to a spill site. Local law enforcement officials should be utilized for traffic control outside of the terminal. The need for site control and security is to protect the public for their own safety and to protect the environment.

Safe Distance and Places of Refuge:

A place of safe refuge will be designated in case an evacuation would be necessary. The main office will be the initial place of refuge for terminal employees,

which is easily accessible and provides protection from the elements. It will be the duty of the Emergency Coordinator to account for all personnel.

Evacuation Routes and Procedures:

An evacuation shall take into consideration prevailing winds, drainage, location of the exit gates, and location of the pipelines, truck racks and storage tanks. The movement of product, vapor clouds, smoke and heat from fire must also be taken into consideration. Evacuation routes shall be designated by the Emergency Coordinator and shall be appropriate for the location and nature of the incidents as well as other site conditions.

Decontamination:

Safety equipment and protective clothing shall be worn at all times in designated areas, by all persons in conformance with the requirements of 29 CFR Part 1910.120.

1. Unnecessary contact with contaminated surfaces or with surfaces suspected of being contaminated should be avoided.
2. Eating, drinking, chewing gum or tobacco, smoking, or any practice that increases the probability of hand to mouth transfer and ingestion of materials is prohibited except in designated areas.
3. Hands and face must be thoroughly washed upon leaving the work area and before eating or drinking.
4. Personnel should shower as soon as possible after the protective garment is removed and the work activity for the day has been terminated.
5. Before entering a vehicle, rinse boots with water, remove outer clothing (coveralls, jacket, hard hat) and place in rear of vehicle away from sampling equipment. Protective clothing which has been soiled from the day's activities will either be disposed of (tyvek) or laundered. Disposable items such as

gloves, protective booties, and other protective gear shall be placed in a garbage bag and disposed with other solid wastes.

B.2.2 FIRES OR EXPLOSIONS

Immediate Actions:

1. Take life saving actions as necessary.
2. Notify the Terminal Superintendent or Emergency Coordinator.
3. Assist the Operator in controlling the release of liquids or other steps appropriate in controlling the fire (if this can be done without endangering personnel).
4. Call for assistance, as needed.
5. If proper training has been received, begin fire fighting procedures to control or extinguish the fire.

Firefighting:

1. Only personnel with proper training should be used to fight fires.
2. Once firefighters have arrived, all fire fighting activities will be coordinated by the local Fire Department.
3. Personnel without prior firefighting training will be used to:
    a. Assist trained firefighters;
    b. Assist with traffic control;
    c. Man road blocks.
4. A complete listing of available fire extinguishers is contained in Appendix F.

B.2.3 SPILLS AND/OR LEAKS

Oil spill response typically involves four general phases: detection; mitigation; containment; and recovery.

Spill Detection:

Spill detection is the responsibility of each CENEX Pipelines and Terminals employee, including site personnel, maintenance personnel, dispatchers, supervisors and contracted flight personnel. The Manager of CENEX Pipelines and Terminals shall have overall responsibility for spill/leak detection. When a spill is detected, the persons involved should immediately notify CENEX Operations Personnel, and/or the CENEX emergency telephone number (1-800-421-4122). Spill responders are to follow the emergency notification and response procedures contained in Section B.1 of this manual.

The equipment and techniques used to detect and locate spills and/or leaks include:

1. Valves, pipelines and tanks are visually inspected for signs of leakage and spills by CENEX operators.
2. Remote pipeline pressure, pump status and tank levels are continuously monitored through the use of a Supervisory Control and Data Acquisition (SCADA) System. Deviations from pipeline pressure setpoints, or unexplainable tank level fluctuations activate an alarm condition and shutdown of operations. Pressure differentials between pipeline pump stations are evaluated to identify the general location of the leak. CENEX operators and/or contracted aircraft are dispatched to survey the pipeline and locate the leak.
3. Pipelines are inspected weekly by contracted aircraft. Areas detected by flight personnel with potential signs of spills and/or leaks are visually surveyed by CENEX operators.

Procedures for operation of the SCADA system and for conducting and documenting pipeline system inspections are specific to the particular element of the pipeline system being operated or inspected. All such procedures are contained in the

CENEX Operations and Maintenance Manuals, which shall be consulted when performing spill detection and location activities.

Spill Mitigation

Spill mitigation refers to the process of minimizing the quantity of oil released from the pipeline facility, once a leak is detected. Spill mitigation activities are to commence immediately upon discovery of a spill, since shutdown time may be critical to reducing the quantity of spilled material. Spill mitigation will likely involve operation of pumps, valves, and repair equipment. Emergency shutdown procedures for the various components of CENEX pipeline systems are contained in the applicable Operations and Maintenance Manuals. These procedures shall be followed in the event of a pipeline system leak. Any repair work shall also be in accordance with procedures contained in the Operations and Maintenance Manuals.

Spill Containment

Spill containment should occur either after or concurrent with spill mitigation. The purpose of spill containment is to minimize and prevent the spreading of released materials. Spill containment may involve installation of dikes or other flow-restricting devices, and/or deployment of booms. Please refer to Appendix B for spill containment techniques and procedures.

Spill Recovery

Recovery of spilled materials occurs after or concurrent with containment of the spill. Spill recovery may include pumping of spilled hydrocarbon products, or excavation of contaminated soils. Any recovery of spilled materials which is not considered to be associated with the "emergency response" stage of an incident shall be conducted in accordance with state and federal environmental statutes and regulations. Please refer to Appendix B for spill recovery techniques and procedures.

Pursuant to 40 CFR, Part 300, Subpart J, Use of Dispersants and Other Chemicals, dispersants, surface collecting agents, biological additives or

miscellaneous oil spill control agents will be used on an oil discharge only when authorized by the FOSC. Dispersants and other chemical or biological products that are approved for use on oil discharges are listed on EPA's NCP Product Schedule (obtain by calling EPA at 1-202-382-2190). Sinking agents shall not be authorized for oil discharges.

B.2.4 GAS EVALUATION AND RESPONSE

Toxic Gases Present

1. Secure the area and remain upwind.
2. Monitor vapor cloud and determine appropriate PPE for conditions.
3. Use proper respiratory equipment while threat of toxic gas exists.
4. Continue to monitor vapor cloud.

Flammable Gases Present

In addition to the immediate actions taken to secure the area and monitor the vapor cloud, the following precautions are to be followed if flammable vapors are present:

1. Stay well out of the vapor cloud.
2. Keep all possible ignition sources away from the area.
3. Do not touch metal pipes or other metal objects in the area.
4. Allow the vapor cloud to dissipate before beginning repair and cleanup operations.

Intentional Ignition

1. It is not anticipated that intentional ignition will be considered; however, the decision to intentionally ignite a flammable vapor cloud is only to be made by the Emergency Coordinator.
2. Before ignition, consideration will be given to:
    a. Consultation with local fire protection agency;

    b. Regulatory permitting requirements;
    c. The exact extent of the vapor (area and concentration);
    d. Danger to response personnel and employees and/or the general public;
    e. Ability to control resulting surface fires;
    f. The value of property which may be damaged if ignited;
    g. Repair procedures with and without ignition of cloud.

3. If intentional ignition is decided on, use a flare gun or burning object which can be propelled into the vapor cloud from a safe distance.

B.2.5 REPAIRS AND CLEANUP

Repairs

1. After the emergency condition is under control, repair procedures are to be initiated.
2. Continue to monitor conditions and observe safety precautions concerning fires and hazardous vapors.

Cleanup

1. Coordinate cleanup activities with the primary response contractor and local emergency and regulatory agencies on scene.
2. Begin containment cleanup operations as soon as practical and safe conditions exist.
3. Continue monitoring for hazardous vapors during cleanup. Develop site safety plan and designate a site safety officer if hazardous materials or wastes are encountered.
4. Once the spill has been contained, cleanup activities will commence through the use of recovery equipment and absorbent materials, both CENEX and contractor owned.
5. Use current accepted procedures for cleanup.

6. Dispose of all recovered product and cleanup material in an approved manner. Follow all applicable regulations for hazardous waste disposal.
7. Consult Environmental, Health and Safety Supervisor, as necessary.

B.2.6 TORNADOES

Tornado Watch

1. A tornado watch means that weather conditions are favorable for the development of tornadoes. A tornado is possible.
2. Monitor weather news by radio.
3. Remain close to a shelter (outside work should be stopped, if possible).

Tornado Warning

1. Tornado warnings are issued when a tornado is probable or one has been sighted.
2. Watch for funnel formations, if possible.
3. Listen for a "roaring" sound similar to a jet engine.
4. Stand by to shutdown.

Tornado Approaching

1. Upon hearing or sighting an approaching tornado, begin an orderly shutdown if time permits.
2. If time does not permit, hit the emergency stop.
3. Seek shelter in a secure room or under heavy objects such as metal tables which are bolted down.
4. Stay away from windows.

After a Tornado

1. Take care of any injuries.
2. Check for damage.

3. Decide if operations are to return to normal (no damage), abnormal (requires monitoring), or emergency conditions.

B.2.7 SEVERE THUNDERSTORMS

When a severe thunderstorm and lightning is approaching or striking within three (3) miles, all pipeline and truck rack transfer operations shall cease until the storm has passed.

B.2.8 EARTHQUAKES

Procedure

1. Move to place of safety until after the earthquake.
2. Shut down all transfer operations.
3. Inspect all terminal facilities for visual signs of damage.
4. Begin normal operations only after complete visual inspection.
5. Continue visual inspection during start-up.

B.2.9 TELEPHONE BOMB THREATS

During the Call

1. Treat the threat as real. Do not assume it is a joke.
2. Record the message word-for-word, if possible.
3. Obtain time and location of threatened detonation, if possible.
4. Note any:
    a. Background noise;
    b. Speech peculiarities.

After the Call

1. If time allows:
    a. Notify the Terminal Superintendent or Emergency Coordinator;
    b. Notify appropriate law enforcement agencies;

    c. Begin immediate shut down;

    d. Evacuate employees.

2. If time permits, relocate operations and communication control center.
3. If time does not allow for any of the above, initiate emergency shut down and evacuation.

B.2.10 POST-ACCIDENT REVIEW

After any situation requiring an emergency response, the Emergency Coordinator and Qualified Individual will conduct a post-accident review. Employee actions in responding to the situation will be evaluated to determine if they were appropriate and that the procedures in this manual are effective. Information gathered for the Emergency Report Form and DOT Accident Report (Appendix A) will also be used in this review. Any deficiencies found will be corrected as necessary.

APPENDIX C

MPDES Storm Water Erosion Control Plan

MONTANA POLLUTANT DISCHARGE ELIMINATION SYSTEM STORM WATER EROSION CONTROL PLAN FOR ASSOCIATED CONSTRUCTION ACTIVITIES

CENEX, INC.
FRONT RANGE PIPELINE PROJECT
SANTA RITA TO LAUREL, MONTANA

Prepared For:

Cenex, Inc.
Laurel, Montana

Prepared By:

Trigon Engineering Inc.
1099 18th Street, Suite 1700
Denver, Colorado 80202
(303) 296-9645

March 1, 1995

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MONTANA POLLUTANT DISCHARGE ELIMINATION SYSTEM
STORM WATER EROSION CONTROL PLAN
FOR ASSOCIATED CONSTRUCTION ACTIVITIES

APPLICANT'S NAME:
CENEX, INC.
PO BOX 909
HIGHWAY 212 SOUTH
LAUREL MT 59044
(406) 628-5302

Contact Person: **Mick Gee**

PROJECT NAME: **FRONT RANGE PIPELINE PROJECT**

AUTHORIZED AGENT:
TRIGON ENGINEERING INC.
1099 18TH STREET, SUITE 1700
DENVER CO 80202-1917
(303) 296-9645

Contact Person(s):
Bob McDaniel
Robert Acree
Trent Miller

1.0 PROJECT DESCRIPTION

Cenex, Inc. (Cenex) has proposed the construction of a new steel 16" crude oil pipeline, extending approximately 302 miles from the Santa Rita Terminal to the Laurel Refinery, Montana for the purpose of providing sufficient pipeline capacity to transport crude oil produced in northern Montana and in Alberta, Canada to refineries in the Laurel/Billings, Montana area. Existing pipelines from northern Montana to the Laurel/Billings area currently operate at capacity. Other oil fields in the Big Horn Basin of Wyoming, which have historically supplied a significant portion of the crude oil to this area, are declining at a rate that has prompted the need for additional crude oil to be acquired in Alberta and transported to Laurel/Billings.

The pipeline will be constructed of coated carbon steel, 16-inch outside diameter, API 5LX 60 Grade, with a wall thickness of 0.281 inches. The pipe will be coated to industry standards with fusion bond epoxy, and either coated with concrete or weighted down with concrete weights or anchors where flotation is a possibility. The pipeline will be buried in a

trench approximately five feet deep and will have a minimum cover of 42 inches throughout. The maximum allowable pressure will be 1480 psig.

A portion of the construction will parallel existing pipeline, railroad, transmission line, and highway corridors. Some new disturbance will result from the proposed construction activities. A 50-foot-wide permanent right-of-way (ROW) will be necessary with an additional 25 feet of temporary ROW for construction. The maximum total area of disturbance for pipeline construction is estimated at 2,600 acres. The estimated runoff coefficient of the site during construction = 0.3.

The construction of this pipeline is scheduled to begin in June 1995. The pipeline and ancillary facilities should be complete and operational by November, 1995.

1.1 Location

The proposed pipeline will be approximately 302 miles in length and will span nine counties in Montana: Glacier, Toole, Pondera, Teton, Cascade, Judith Basin, Wheatland, Stillwater and Yellowstone counties (Figure 1). Preliminary route maps have been produced and illustrate the proposed pipeline route as of February 4, 1995 (see Appendix A). The proposed Cenex Front Range Pipeline Project route is anticipated to cross the following Townships and Ranges:

Glacier County

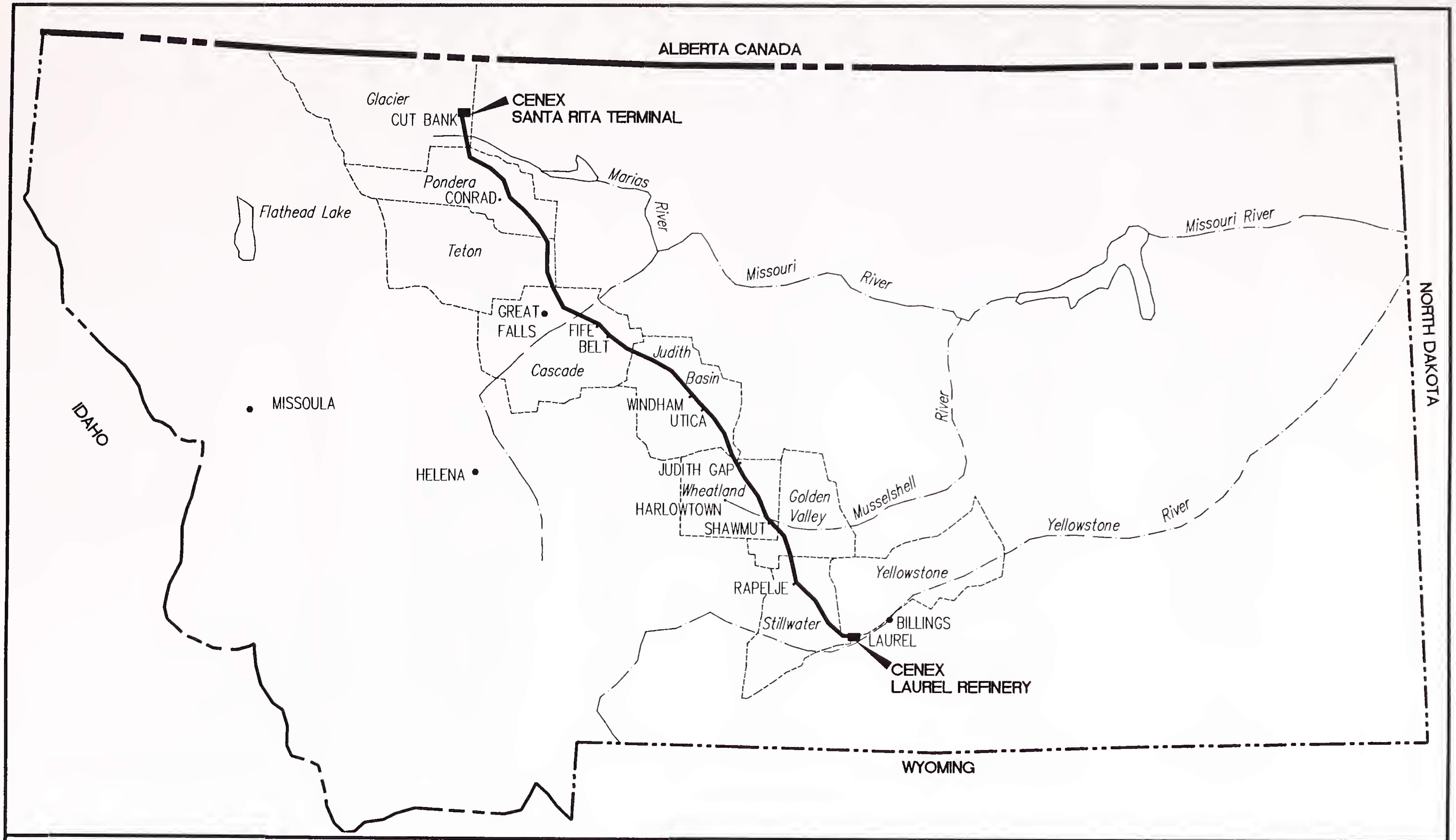
T34N R6W SEC 11, 14, 23, 24, 25, 36; T34N R5W SEC 31, 32; T33N R5W SEC 5, 8, 9, 16, 21, 22, 27, 34; T32N R5W SEC 3, 10, 14, 15, 23, 26, 35

Pondera County

T31N R5W SEC 2, 11, 13, 14, 24, 25; T31N R4W SEC 30, 31; T30N R4W SEC 5, 6, 8, 17, 20, 21, 28, 33, 34; T29N R4W SEC 3, 10, 11, 14, 23, 24; T29N R3W SEC 19, 28, 29, 30, 33, 34, 35; T28N R3W SEC 2, 3, 11, 12; T28N R2W SEC 7, 18, 19, 20, 28, 29, 33; T27N R2W SEC 3, 4, 10, 14, 15, 23, 25, 26, 36; T27N R1W SEC 31; T26N R1W 5, 6, 8, 16, 17, 21

Teton County

T26N R1W SEC 27, 28, 34, 35; T25N R1W SEC 2, 11, 12, 13, 24; T25N R1E SEC 19, 29, 32, 33; T24N R1E SEC 4, 9, 10, 14, 15, 23, 25, 26, 36; T23N R2E SEC 6, 7, 8, 17, 20, 21, 27, 28, 34



CLIENT

CENEX Pipeline Company
FRONT RANGE PIPELINE

DESCRIPTION

PROPOSED 16" CRUDE OIL PIPELINE

SCALE: NONE	REVISION DATE:	DRAWN BY: R. CLIFT	DATE DRAWN: 11/14/94	FILE NAME A697M001	REV: A

PREPARED BY

TRIGON ENGINEERING INC
DENVER COLORADO

FIGURE 1: GENERAL LOCATION MAP

Cascade County

T22N R2E SEC 2, 11, 12,13,24; T22N R3E SEC 19, 29, 30 ,32; T21N R3E SEC 4, 5, 9, 10, 14, 15, 23, 24; T21N R4E SEC 19, 25, 26, 27, 28, 29, 30; T21N R5E SEC 27, 28, 29, 30, 34, 36; T20N R6E SEC 1, 12,13, 24, 25, 30, 31, 32; T19N R6E SEC 1, 2, 3, 4, 11, 12; T19N R7E SEC 7, 18, 19, 20, 28, 29, 33, 34; T18N R7E SEC 2, 3, 11, 13, 14, 24

Judith Basin

T18N R8E SEC 19, 29, 30, 32, 33, 34; T17N R8E SEC 1, 2, 3, 12; T17N R9E SEC 7, 8, 14, 15, 16, 17, 22, 23, 24; T17N R10E SEC 19, 28, 29, 30, 33, 34, 35; T16N R10E SEC 1; T16N R11E SEC 5, 6, 7, 8, 9, 15, 16, 22, 23, 24, 25; T16N R12E SEC 30, 31, 32; T15N R12E SEC 4, 5, 9, 10, 14, 15, 23, 24, 25; T15N R13E SEC 29, 30, 32, 33; T14N R13E SEC 3, 4, 10, 11, 14, 23, 25, 26, 36; T14N R14E SEC 31; T13N R14E SEC 6, 7, 8, 16, 17, 21, 28, 33, 34; T12N R14E SEC 2, 11, 12, 13, 24; T12N R15E SEC 19, 29, 30, 32; T11N R15E SEC 4, 5, 9, 15, 16, 22

Wheatland County

T11N R15E SEC 26, 35; T10N R15E SEC 2, 11, 14, 23, 25, 26, 36; T10N R16E SEC 31; T9N R16E SEC 5, 6, 8, 9, 16, 21, 22, 26, 27, 35, 36; T8N R17E SEC 6, 7, 8, 16, 17, 21, 22, 27, 34, 35; T7N R17E SEC 3, 10, 11, 13, 14, 24, 25, 36; T7N R18E SEC 31; T6N R18E SEC 6, 7, 8, 16, 17, 21, 28, 33

Golden Valley

T5N R18E SEC 3, 4, 10, 15, 22, 23, 26, 35; T4N R18E SEC 1, 2, 12, 13

Stillwater County

T4N R19E SEC 18, 19, 20, 29, 30, 32, 33, 34; T3N R19E SEC 3, 10, 11, 13, 14, 24, 25; T3N R20E SEC 29, 30, 32; T2N R20E SEC 4, 5, 9, 10, 14, 15, 23, 24, 25; T2N R21E SEC 30, 31, 32, 33; T1N R21E SEC 3, 4, 10, 11, 13, 14, 24; T1N R22E SEC 19, 29, 30, 32, 33; T1S R22E SEC 2, 3, 11, 12, 13; T1S R23E SEC 18, 19, 20

Yellowstone County

T1S R23E SEC 22, 23, 25, 26, 27, 36; T2S R24E SEC 1, 6, 7, 16, 17, 18

2.0 SEDIMENT AND EROSION CONTROL

The objective of this plan is to minimize erosion of disturbed areas during construction and post-construction phases of the proposed pipeline project. The affects of construction activities can be minimized by:

1. Limiting the disturbance to the smallest area possible to accomplish the project objectives;
2. Avoiding areas of sensitive habitats, if possible;
3. Keeping the amount of cut and fill to a minimum;
4. Diverting upslope runoff to more stable locations;
5. Utilizing the appropriate Best Management Practices (BMP) and other control measures to remove or reduce pollutants from storm water prior to discharge from the construction site; and
6. Stabilizing slopes and revegetating disturbed areas as soon as practicable.

Throughout all phases of construction activities, various BMPs and erosion control measures will be implemented to minimize the contact of storm water with materials or reduce pollutants in storm water. Appropriate BMPs and erosion control measures will be utilized as temporary measures during construction to control erosion and as permanent measures following construction to stabilize disturbed areas. Application of erosion and sediment control measures will be determined on site-specific characteristics.

2.1 Clearing and Grading

Clearing of the right-of-way (ROW) will be limited to the smallest areas possible to provide a safe and efficient work areas for all phases of pipeline construction. Additional work space, temporary use areas, will be required as staging areas for special crossing, i.e., road, railroad, stream and wetland crossings. The following clearing and grading procedures will be implemented construction practices:

- Shrubs, brush and small trees will be cut to ground level and cleared from the ROW using appropriate equipment such as brush-hogs and chain-saws. Large trees will be felled and cleared to the edge of the ROW. Cut trees and shrubs will be disposed of in accordance with landowner specifications.

- Grading will be required along the trenchline in all upland areas, in areas of irregular topography to create level work areas, and to provide adequate ROW access and safe working conditions. Grading will not be allowed in wetland areas. Downslope and

sideslope perimeter erosion and sediment control measures will be installed during grading. Typically, grading is accomplished using dozers or maintainers.

- In graded areas, topsoil will be removed to a maximum depth of 12 inches and stockpiled on the non-working side of the ROW where possible. The subsoil (spoils) will be stockpiled adjacent to, but separate from the topsoil.

- Gravel/stone ramps will be installed at access points to public roads, as needed, to prevent or minimize the tracking of mud, dirt, sediment or similar materials onto the roadway. Deposits that have been tracked by vehicles or have been transported by wind or storm water off the ROW will be promptly cleaned-up.

2.2 Trenching

Several procedures will be utilized during trenching operations to reduce erosion and sediment transport and to protect valuable topsoil resources.

- In areas that do not require grading, topsoil segregation will be accomplished during trenching operations using a double-ditching procedure. Topsoil will be removed to a maximum depth of 12 inches and stockpiled on the non-working side of the ROW where possible. The trench spoils will be stockpiled adjacent to, but separate from the topsoil.

- Trench breakers will be constructed in the open trench in areas of sloping terrain to reduce sediment transport and to control runoff from channeling.

- If trench dewatering is necessary, water will be discharged to the ground where adequate vegetative cover exists to prevent channeling and sediment transport, or into temporary dewatering structures constructed of silt fence and straw bales (Figure 2).

2.3 Backfilling

Backfilling procedures will incorporate processes to protect topsoil and to prevent erosion of backfill material.

- Topsoil and trench spoils will remain segregated during backfilling. Under no circumstances will the topsoil be used for padding or backfill.
- After pipe installation, padding will be used to protect the pipeline from rocks. Padding material may consist of original trench subsoil that has been screened of rock or imported rock-free soil.
- After padding is completed, trench spoils will be backfilled. Excess spoils from the trench will be spread evenly across the ROW.

2.4 Hydrostatic Testing

After backfilling is completed, the pipeline will be hydrostatic tested to ensure pipeline integrity. The testing procedure consists of the diversion of water sufficient to fill segments of the pipe to be tested and pressuring the pipe for a specified time. Following completion of the testing, the test water will be transferred to other portions of the line for subsequent testing or discharged to the ground through a dewatering structure (Figure 2). The rate of discharge will be controlled to prevent flooding or erosion.

2.5 Stabilization, Reclamation, and Revegetation

Stabilization, reclamation, and revegetation measures facilitate the control of erosion and sediment transport by establishment of a vegetative cover that protects soil resources and by implementation of mechanical structures that divert or impede storm water runoff and trap sediment. The following discussion addresses both temporary and permanent measures.

Following backfilling of the trench, the area will be restored to as near the natural grade as feasible. However, a temporary ditchline berm will be left, approximately eight inches high on center, until reseeding is begun. At that time, any of the berm that has not settled into the ditch will be contoured into the surface to natural grade. Once recontouring is completed, graded areas of the ROW will require ripping or disking to relieve compaction. This will be done prior to replacement of topsoil across the disturbed surface. Following topsoil replacement, the entire ROW will be disked to relieve any topsoil compaction.

Temporary perimeter erosion control measures will not be removed prior to stabilization of upstream or upslope areas. Permanent interceptor channels (waterbars) will be constructed as specified after final grading and prior to seeding.

Once backfilling, contouring, and topsoil spreading are complete, a weed-free seed mix approved by the district weed boards will be applied to the ROW. The seed will be drilled or broadcast and rolled in the ROW. The contents of these seed mixes will vary with the terrain but shall remain standard for that type of habitat throughout the entire length of the pipeline. Standard mixes have been developed for native rangelands, dry pasturelands, irrigated pasturelands, and salty bottomland rangelands. Except where specified by the landowner, or in wetlands, the following seed mix and application rates will be used:

Native Rangeland

Species	Percent of Mix	Application Rate*
Western Wheatgrass	65%	3.9
Slender Wheatgrass	10%	6
Green Needlegrass	25%	1.5

*pounds per acre, pure live seed

Dry Pastureland

Species	Percent of Mix	Application Rate*
Pubescent Wheatgrass	58%	7.0
Smooth Brome	42%	5.0

*pounds per acre, pure live seed

Irrigated Pastureland

Species	Percent of Mix	Application Rate*
Orchardgrass	43%	3.0
Clover	57%	4.0

*pounds per acre, pure live seed

Salty Bottomland Rangeland

Species	Percent of Mix	Application Rate*
Tall Wheatgrass	66.5%	10.0
Shoshoni Wildrye	33.5%	5.0

*pounds per acre, pure live seed

Following completion of reseeding, access to the ROW will be limited to existing roads.

Reseeding will not take place within the boundaries of delineated wetlands. The upper 12 inches of wetland topsoil (sod) will be segregated and stockpiled from the trench subsoil and watered as needed to keep the vegetation moist. The ditch will be backfilled with subsoil and then covered with the sod.

2.6 Best Management Practices for Sediment and Erosion Control

The potential for erosion and sediment transport is greatest in areas where ground surfaces have been disturbed and soil is exposed to physical agents such as wind and water. In an effort to protect existing water quality, both temporary and permanent BMPs and other erosion control measures have been designed to minimize the affects erosion due to storm water runoff. In most cases, a combination of vegetative, structural and storm water management practices are utilized to control erosion and sediment transport. In general, straw bale barriers, silt fence, and interceptor channels (waterbars) will be appropriate control measures to be utilized for sediment and erosion control during construction. As conditions require, other control measures such as sediment traps or basins may be considered.

Temporary and permanent sediment and erosion control practices will include, but are not limited to, the following:

2.6.1 Natural Buffer Zones

Natural buffer zones, approximately 50 feet wide, will be utilized on each side of wetlands and streams encountered along the proposed ROW. The width of the 50-foot buffer zone will be measured perpendicular from the edge of the wetland boundary or from the high water mark for streams. For slopes greater than 35%, the buffer zone width will be 100 feet. These buffers will be maintained until actual stream or wetland construction begins. Access points across streams may be constructed prior to actual stream construction activities (see Stream-Crossing Construction Procedures).

2.6.2 Straw Bale Barriers

Straw bale barriers (Figure 3) will be installed as a temporary measure below disturbed areas subject to sheet erosion and in minor swales and ditch drainages to intercept and detain small amounts of sediment from leaving the construction site. It also may be used as a backup to silt fence. This measure is generally only effective for less than 3 months.

Straw-bale barriers can be very effective if properly placed, installed and maintained. Bales should be placed perpendicular to runoff direction with the bases keyed a minimum of 4 inches into the soil. The bindings on the bales should be horizontal. Each bale will be securely anchored with two stakes or re-bars, driven in flush with the top of the bale.

2.6.3 Silt Fence

Silt fence (Figure 4) will be installed as temporary measures to intercept or detain small amounts of sediments from disturbed areas as a result of sheet or overland flows and low-to-moderate level channel flows. Silt fence will be used along streambanks between the graded ROW and the stream, around stockpiled spoils, perpendicular to minor swales or ditch lines, and at diversion channel outlets.

Silt fence may be used in conjunction with other control measures. Proper placement and installation of silt fences will maximize the effectiveness. The base of the fabric will be keyed in and backfilled at least 6 inches into the ground on the upslope side of the barrier. Fence sections should be overlapped at least 6 inches when two sections are joined. This control measure requires regular inspections and will be repaired or replaced promptly, as needed.

2.6.4 Interceptor Channels (Waterbars)

Interceptor channels (Figure 5) will be constructed on side slopes of 2:1 or flatter to act as a barrier to intercept and divert storm water runoff from the graded ROW to stable vegetated areas or into sediment barriers such as straw bales or silt fence. These

channels are generally installed using a dozer or maintainer where the channel is cut cross-slope with a gradient of 3% to 5%. The resulting downslope berm will be well compacted by a dozer track. The berms will be maintained and repaired as conditions require. Generally, interceptor channels will be horizontally spaced as follows:

Slopes <5%	300 feet
Slopes 5-10%	200 feet
Slopes 10-40%	100 feet

2.6.5 Trench-breakers

Control of water movement within the ditch wherever the trench traverses grades of greater than 5% will be accomplished by installing trench-breakers (Figure 6) prior to backfilling. Trench-breakers usually consist of sandbags, earth-filled sacks, or sprayed foam barriers. Under no circumstances will topsoil be used as bag fill. Typical spacings for breakers are shown in the following table.

Average Slope (%)	Breaker Spacing (ft)
<5	None
5 - 10	100 - 150
11 - 15	80 - 100
16 - 20	70 - 80
21 -30	50 - 70
> 30	25 - 50

2.6.6 Other Erosion Control BMPs

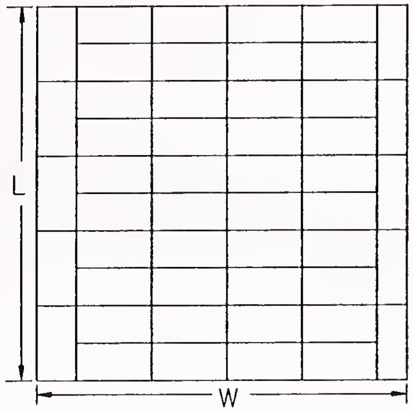
The following control measures and good housekeeping practices will be implemented to prevent or minimize potentially polluting construction materials from contact with storm water:

- Water sprinkling will be implemented for fugitive dust control on haul roads and other graded traffic routes. Sprinkling of topsoil and spoil piles, as needed, will minimize the effects of wind erosion and reduce fugitive dust. Areas will be resprayed as necessary to keep air-borne dust to a minimum.

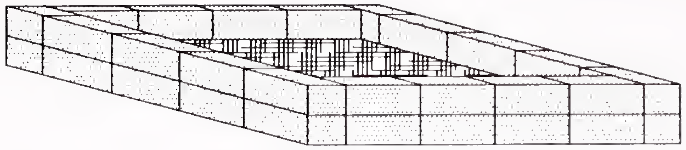
- Regular garbage, rubbish, construction waste, and sanitary waste disposal will be maintained.

- Storage areas protected from storm water will be provided for chemicals, paints, solvents, fuel, and any other potentially toxic materials.

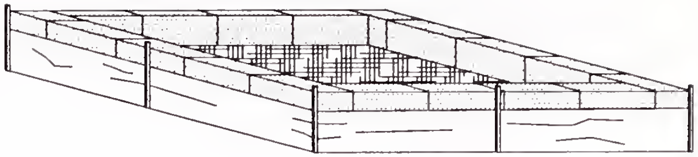
- All hazardous materials or products will be properly contained and disposed of in a manner approved by the Department of Health and Environmental Sciences (DHES).



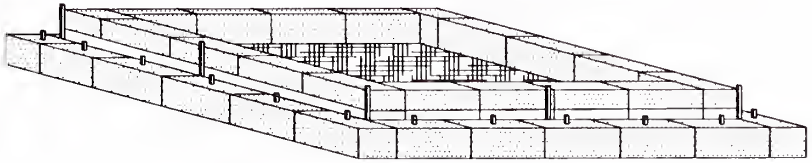
STEP 1: ARRANGE STRAW BALES ON LEVEL GROUND TIGHTLY PACKED AS SHOWN.



STEP 2: INSTALL ANOTHER LAYER OF STRAW BALES ON THE OUTER EDGE AS SHOWN.



STEP 3: INSTALL SILT FENCE ALL AROUND STRUCTURE AS SHOWN.



STEP 4: INSTALL ANOTHER LAYER OF STRAW BALES ON THE OUTSIDE OF SILT FENCE AND SECURE BY DRIVING STAKES THROUGH EACH OF THE OUTER BALES.

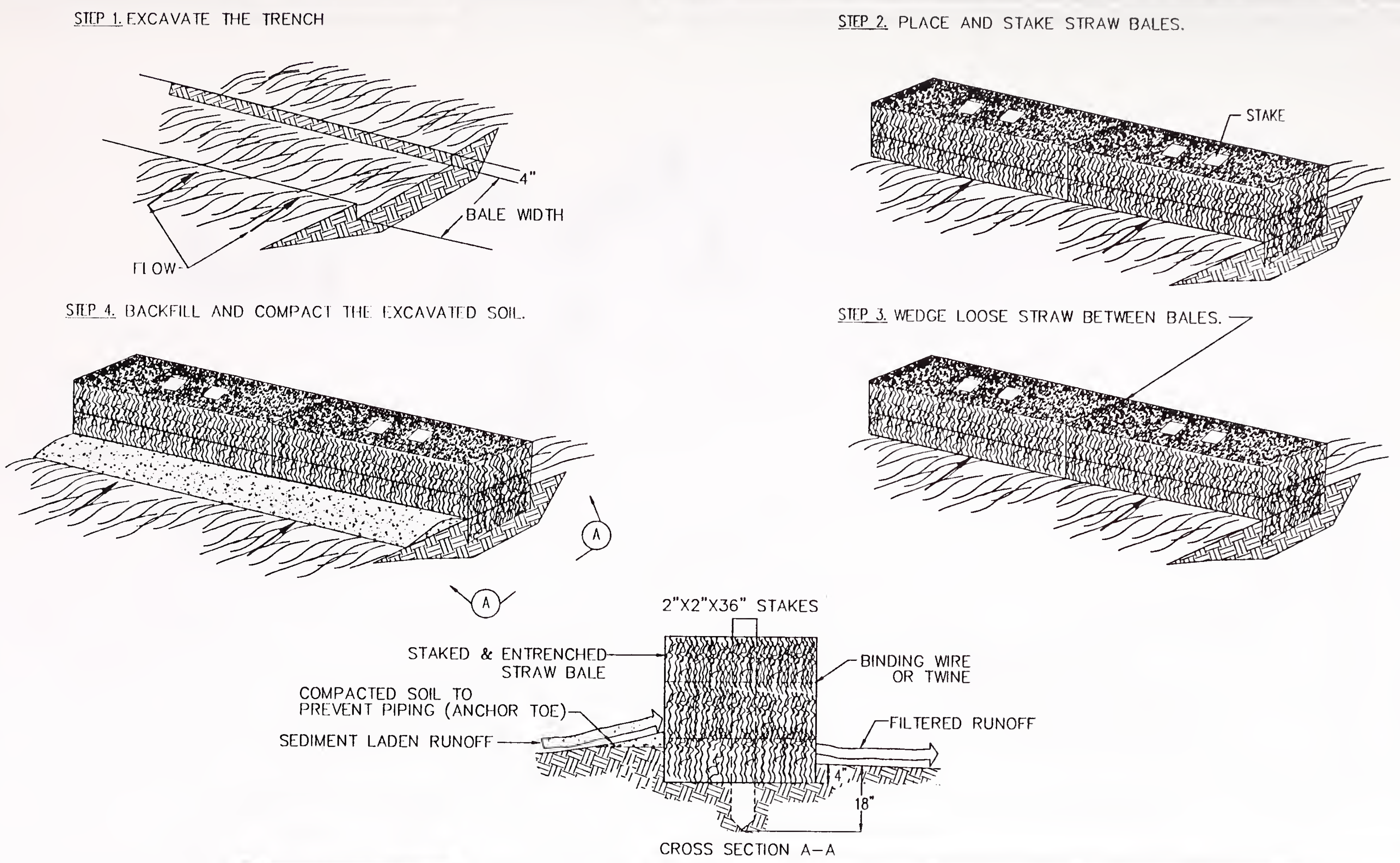
CLIENT
CENEX Pipeline Company
FRONT RANGE PIPELINE

DESCRIPTION
TYPICAL DEWATERING STRUCTURE

SCALE: NONE
REVISION DATE:
DRAWN BY: L. COLLINS
DATE DRAWN: 2/28/95
FILE NAME: A697M010
REV: 0

PREPARED BY
TRIGON ENGINEERING INC
DENVER COLORADO

FIGURE 2


STEP 1. EXCAVATE THE TRENCH
4"
BALE WIDTH
FLOW
STEP 2. PLACE AND STAKE STRAW BALES.
STAKE
STEP 4. BACKFILL AND COMPACT THE EXCAVATED SOIL.
STEP 3. WEDGE LOOSE STRAW BETWEEN BALES.
A
A
2"X2"X36" STAKES
STAKED & ENTRENCHED STRAW BALE
BINDING WIRE OR TWINE
COMPACTED SOIL TO PREVENT PIPING (ANCHOR TOE)
SEDIMENT LADEN RUNOFF
FILTERED RUNOFF
4"
18"
CROSS SECTION A-A

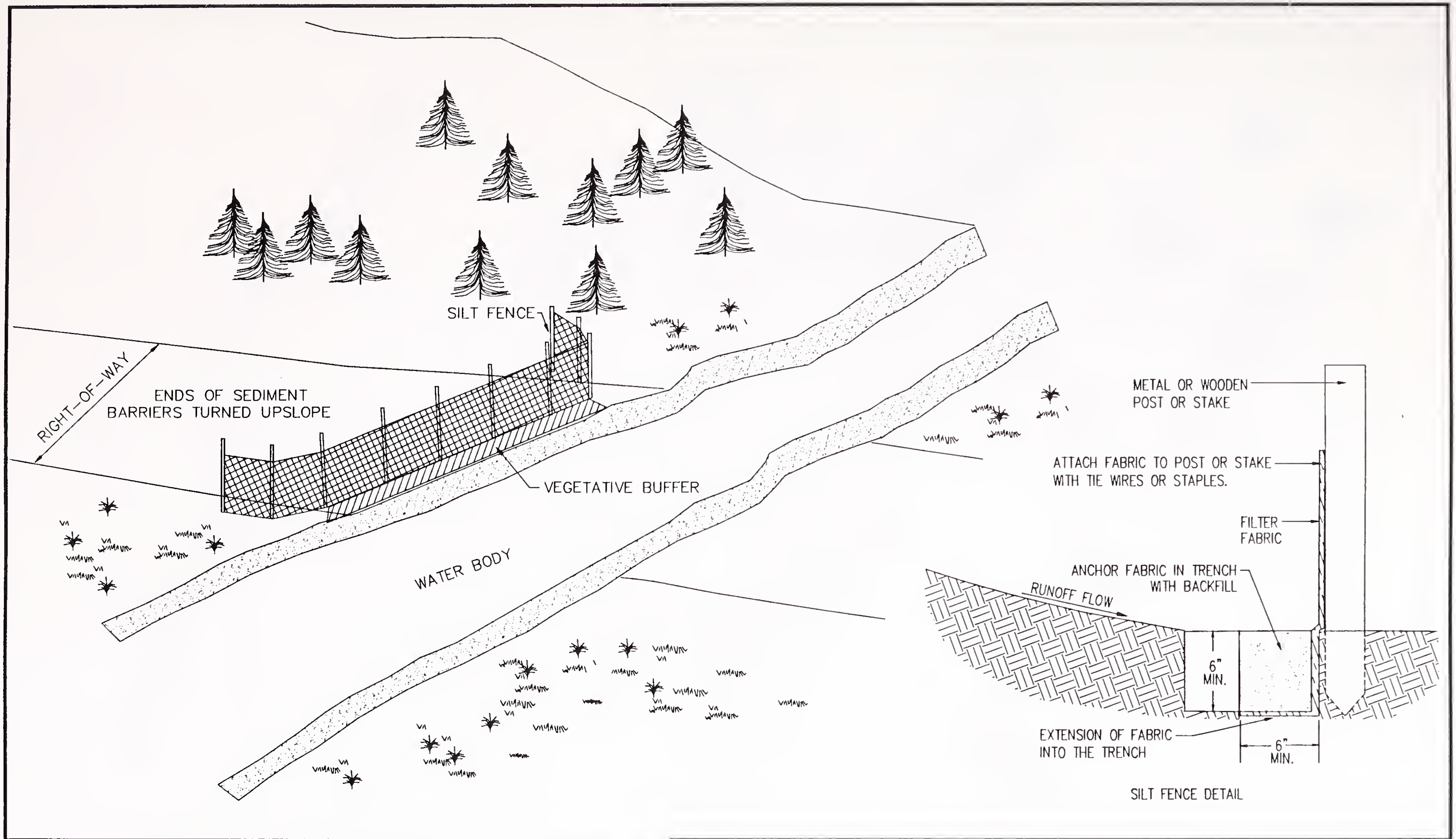
CLIENT
CENEX Pipeline Company
FRONT RANGE PIPELINE

DESCRIPTION
STRAW BALE BARRIERS

SCALE: NONE
REVISION DATE:
DRAWN BY: L. COLLINS
DATE DRAWN: 2/28/95
FILE NAME: A697M012
REV: 0

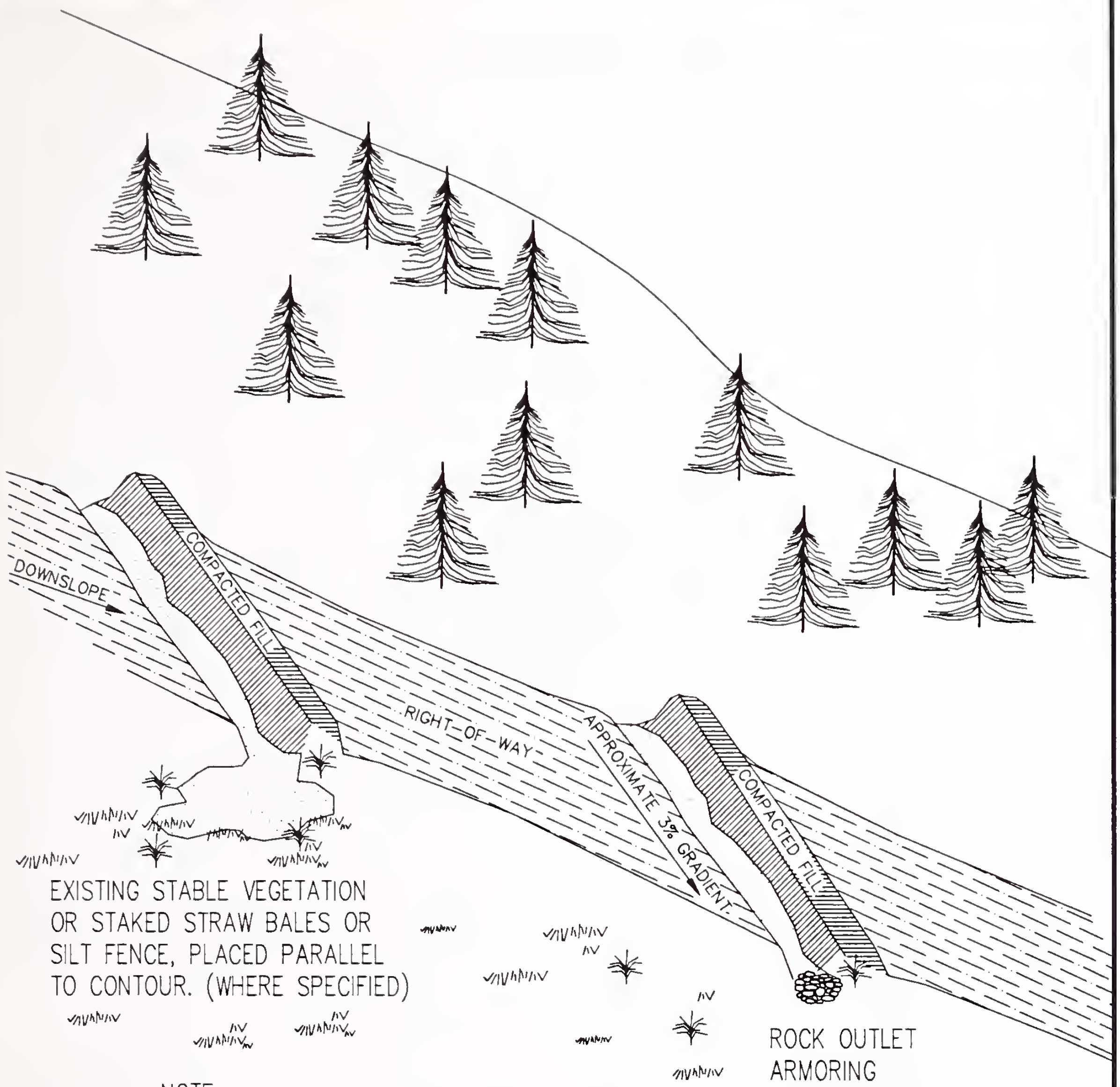
PREPARED BY
TRIGON ENGINEERING INC
DENVER COLORADO

FIGURE 3

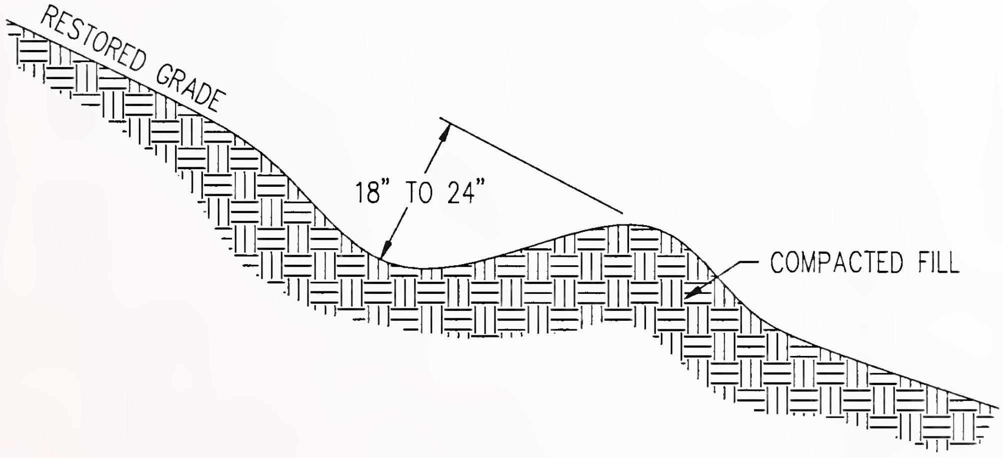

SILT FENCE
RIGHT-OF-WAY
ENDS OF SEDIMENT BARRIERS TURNED UPSLOPE
VEGETATIVE BUFFER
WATER BODY
METAL OR WOODEN POST OR STAKE
ATTACH FABRIC TO POST OR STAKE WITH TIE WIRES OR STAPLES.
FILTER FABRIC
ANCHOR FABRIC IN TRENCH WITH BACKFILL
RUNOFF FLOW
6" MIN.
EXTENSION OF FABRIC INTO THE TRENCH
6" MIN.
SILT FENCE DETAIL

CLIENT **CENEX** Pipeline Company FRONT RANGE PIPELINE			DESCRIPTION SILT FENCE		
SCALE: NONE	REVISION DATE:	DRAWN BY: L. COLLINS	DATE DRAWN: 2/28/95	FILE NAME: A697M011	REV: 0
	PREPARED BY TRIGON ENGINEERING INC DENVER COLORADO				

FIGURE 4


DOWNSLOPE
COMPACTED FILL
RIGHT-OF-WAY
APPROXIMATE 3% GRADIENT
COMPACTED FILL
EXISTING STABLE VEGETATION OR STAKED STRAW BALES OR SILT FENCE, PLACED PARALLEL TO CONTOUR. (WHERE SPECIFIED)
ROCK OUTLET ARMORING (WHERE SPECIFIED)

NOTE:
1. ROCK ARMOR SHOULD SERVE TO DISSIPATE FLOW BUT NOT BLOCK FLOW
2) CLEAN OUTLET ARMOR OF SEDIMENT TO PREVENT LOSS OF FUNCTION.



CROSS-SECTION

DESCRIPTION

PERMANENT INTERCEPTOR CHANNELS (WATERBARS)

REV: A

FILE NAME: A697M006

DATE DRAWN: 2/9/95

DRAWN BY: GWD

PREPARED BY

TRIGON ENGINEERING INC
DENVER COLORADO

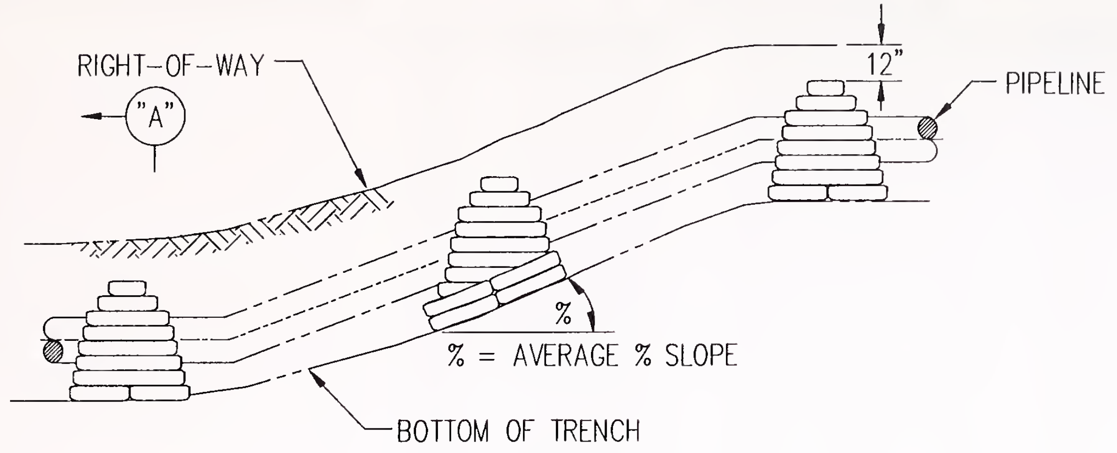
CLIENT

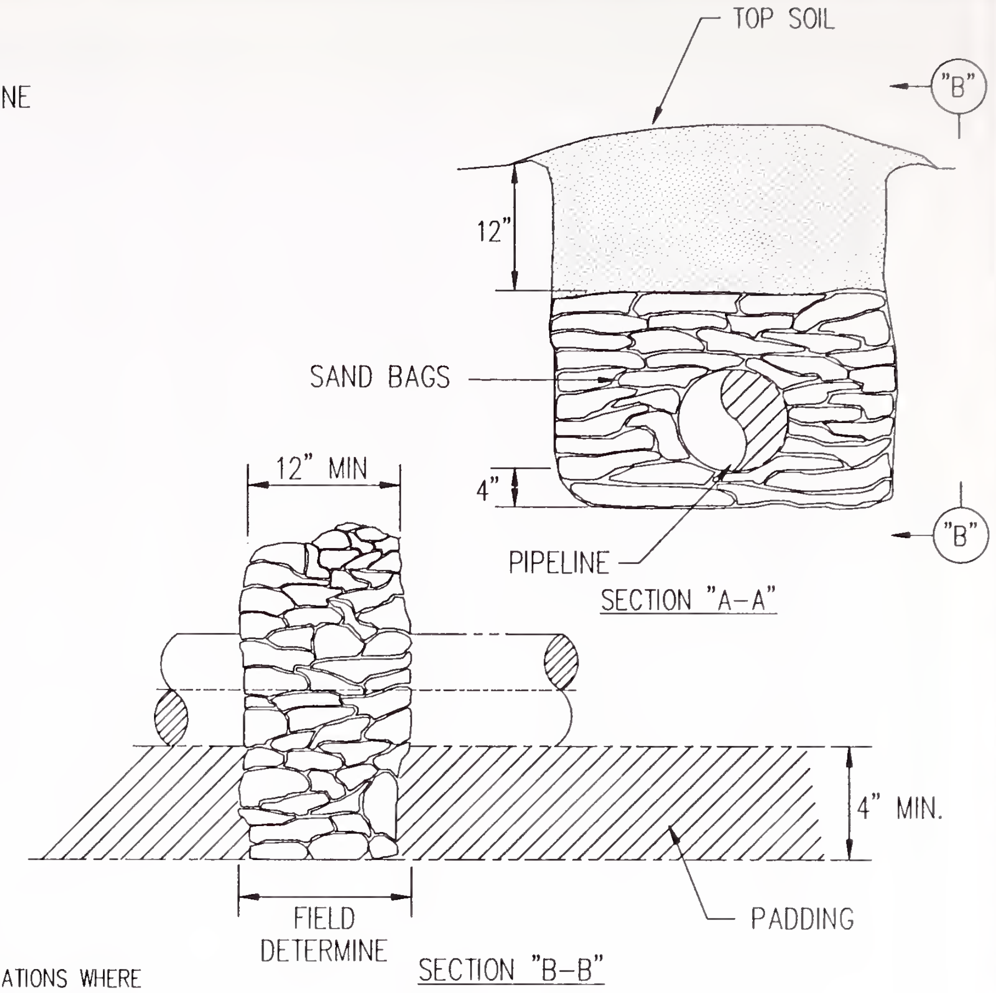
CENEX Pipeline Company
FRONT RANGE PIPELINE

REVISION DATE:

SCALE: NONE

FIGURE 5





BREAKER SPACING

AVG. SLOPE (%)	SPACING (FT.)
<5	NONE
5-10	100-150
11-15	80-100
16-20	70-80
21-30	50-70
>30	25-50

NOTES:

1. BREAKERS SHALL BE INSTALLED AT SHARP CHANGES OF SLOPE (<5%) ALONG TRENCHLINE AND AT LOCATIONS WHERE THE NATURAL DRAINAGE PATTERNS, PROFILE OR BACKFILL MATERIAL WILL CAUSE THE TRENCH TO ACT AS A DRAIN.
2. BREAKER SHALL BE FORMED USING SAND BAGS, EARTH-FILLED SACKS OR SPRAYED FOAM BARRIERS.

CLIENT
CENEX Pipeline Company
FRONT RANGE PIPELINE

DESCRIPTION
TRENCH BREAKER REQUIREMENTS

SCALE: NONE
REVISION DATE:
DRAWN BY: L. COLLINS
DATE DRAWN: 2/28/95
FILE NAME: A697M009
REV: 0

PREPARED BY
TRIGON ENGINEERING INC
DENVER COLORADO

FIGURE 6

- Any spills of liquid or dry materials that have occurred will be promptly cleaned up. Spills of toxic or hazardous material will be reported to the appropriate State or local government agency.

- If any measurable quantities of sediment are discharged from the site as a result of structural failure or lack of designed capacity of the BMPs, the sediment will be cleaned up within 24 hours of the discharge and placed back on the ROW or properly disposed of in a manner approved by the DHES.

- Construction equipment and vehicles will be inspected for leaks, and necessary repairs will be made. Wash-down areas protected from storm water will be provided for construction equipment and vehicle cleanup.

- Adequate sanitary facilities will be provided onsite and will be regularly maintained.

3.0 WETLAND AND STREAM CROSSINGS

The proposed pipeline falls within two major watersheds, the Missouri River Basin and the Yellowstone River Basin. Approximately 220 streams and wetlands will be affected by the proposed pipeline route. As of February 4, 1995, approximately 36 perennial streams have been identified along the proposed pipeline route (Table 1). Approximately 18.8 acres of wetland habitat will be temporarily impacted by the proposed construction activities.

3.1 Wetland Construction Procedures

Crossing procedures for construction of a pipeline across wetland areas are determined by the type of wetland encountered, the length of the crossing, and the level of soil saturation. The method of crossing can be determined by field inspection, using best professional judgment. Selection of the best crossing procedure or modifications to a procedure will be coordinated with the chief inspector and an environmental monitor.

The affects of pipeline construction to wetlands can be minimized by limiting the disturbances to wetlands encountered along the pipeline route. This can best be achieved by avoiding the staging of equipment and supplies and the stockpiling of spoil materials within wetlands. The width of ROW clearing will be minimized, to the extent practicable, to allow safe construction of the pipeline.

For this project, two construction methods will be considered for wetland crossings.

TABLE 1: Proposed perennial stream crossings in each county:

County	Stream Crossing Name	Location
Glacier County	Old Maids Coulee	T34N R5W SEC 31: SESE
	Marias River	T32N R5W SEC 35: SWSE
Pondera County	Bullhead Creek	T30N R4W SEC 8: NENW
	Unnamed	T30N R4W SEC 8: NENW
	Unnamed	T30N R4W SEC 8: NWSE
	Dry Fork Marias River	T28N R3W SEC 2: NWNW
	Pondera Coulee	T28N R2W SEC 18: NWSE
Teton County	Teton River	T25N R1W SEC 13: NWSE
	Lake Creek	T23N R2E SEC 27: SWSW
Cascade County	Box Elder Creek	T21N R5E SEC 34: NWSW
	Cora Creek	T18N R7E SEC 2: SWSW
	Belt Creek	T19N R6E SEC 11: NENE
Judith Basin County	Williams Creek	T18N R8E SEC 34: SESW
	Suprise Creek	T16N R11E SEC 8: SENE
	Wolf Creek	T16N R11E SEC 25: NWNW
	Coyote Creek	T15N R12E SEC 5: NWNE
	Willow Creek	T15N R12E SEC 4: SWSE
	Sage Creek	T15N R12E SEC 14: SWSE
	Judith River	T14N R13E SEC 14: SWNE
	Coyote Creek	T12N R14E SEC 2: SWSE
	West Buffalo Creek	T12N R14E SEC 11: SENE
	Barrows Creek	T11N R15E SEC 4: SESW
Wheatland County	East Fork Roberts Creek	T10N R15E SEC 2: SENW
	East Fork Roberts Creek	T10N R16E SEC 35: NWNW
	Roberts Creek	T8N R17E SEC 12: SWNE
	Musselshell River	T7N R17E SEC 24: SWSW
	Mud Creek	T6N R18E SEC 6: SESE
	Fish Creek	T6N R18E SEC 28: SESE
Golden Valley County	Van Winkle Creek	T4N R18E SEC 2: SWNE
	North Fork Big Coulee Creek	T4N R18E SEC 12: SESW
Stillwater County	South Fork Big Coulee Creek	T4N R19E SEC 19: NENW
	Sixshooter Creek	T3N R20E SEC 32: SWSW
	Middle Creek	T2N R20E SEC 4: NESW
	Cedar Creek	T2N R20E SEC 9: NENE
	Greenwood Creek	T2N R21E SEC 30: SWSE
Yellowstone County	None	

3.1.1 Standard Seasonal Wetland Pipeline Construction Method

The standard method used for pipeline construction across seasonal wetlands can be implemented for wetland areas where the soil is dry and firm and capable of supporting heavy construction equipment. Typically the best time to use this method is during the late summer and fall months where temperatures are relatively high and rainfall is generally low.

3.1.1.1 Clearing and Grading

- All equipment will be cleaned and inspected prior to entering a wetland and no leaking equipment will be allowed.
- Sediment barriers (silt fencing, straw bales, and/or diversion terraces) will be installed across the pipeline ROW on either side of a wetland area, approximately 50' upland to the wetland boundary.
- Until actual wetland construction begins, a 50' vegetative buffer will be maintained upland to the wetland boundary. Construction and vehicular access will be strictly limited across wetland areas.
- The width of ROW disturbance will be minimized.
- Woody vegetation, such as trees and shrubs, will be cut to ground level and cuttings will be removed from the wetland areas.
- Non-woody vegetation will be cut and removed using standard construction methods.
- No grading will occur within the wetland boundary.
- Stream-crossing construction specifications will be utilized for streams encountered within wetland areas.

3.1.1.2 Trenching

- Wetland topsoil (sod) will be removed to a depth of 12" and for the width of the trenchline and stockpiled in the adjacent wetland within the ROW.
- Ditching will be accomplished using a backhoe or dragline. The trench will be dug to a depth sufficient to cover the pipe with a minimum of 42" of backfill.
- Trench spoils (subsoil) will be sidecast into the adjacent wetland, segregated from the topsoil.

3.1.1.3 Pipeline Installation

- Pipe sufficient to cross a wetland will be made-up (strung, welded, and x-rayed) on the adjacent upland ROW.
- The made-up section(s) of pipe will be carried and lowered into the trench using side-booms or similar equipment. The pipe will be weighted by means of a concrete-coating or concrete weights to prevent flotation, as needed.

3.1.1.4 Backfill

- Well-compacted trench breakers will be installed at all wetland boundaries. Breakers will minimize upland drainage along the pipeline into the wetland.
- The stockpiled subsoil will be returned the ditch, followed by replacement of the topsoil.
- Although pipeline padding is generally unnecessary in wetlands, the need for padding will be determined on a site specific basis by the chief inspector and an environmental monitor.

3.1.1.5 Cleanup and Restoration

- Excess spoil materials will be removed from the wetland and spread on the adjacent upland ROW.
- Contours will be restored to original preconstruction elevations.
- All construction materials and supplies, as well as woody materials from clearing and grading activities will be removed from the wetland area.
- Generally, revegetation of the wetland ROW will not be necessary. Typically, the wetland area will revegetate naturally within two to three years after construction is completed.
- Final cleanup will be conducted as weather conditions permit.

3.1.2 Standard Wetland Construction Method

In wetland areas where soil moisture conditions do not allow construction using seasonal wetland construction procedures, the following wetland construction procedures will be implemented (Figures 7 and 8). Soil conditions in these areas are typically saturated within 18” of the ground surface and cannot support the weight of construction equipment without disturbing wetland soils. In general, these procedures are modifications to the seasonal wetland construction procedures and will further reduce construction impacts to wetland areas.

3.1.2.1 Clearing and Grading

- All equipment will be cleaned and inspected prior to entering a wetland, and no leaking equipment will be allowed in wetland areas.
- Sediment barriers (silt fencing, straw bales, and/or diversion terraces) will be installed across the pipeline ROW on either side of a wetland area, approximately 50’ upland to the wetland boundary.
- A 50’ upland vegetative buffer will be maintained until actual wetland construction begins. Construction and vehicular access will be strictly limited across wetland areas.
- Minimize the width of ROW disturbance.

- Woody vegetation, such as trees and shrubs, will be cut to ground level and cuttings will be removed from the wetland areas.
- Non-woody vegetation will be cut and removed using standard construction methods.
- No grading will occur within the wetland boundary.
- Stream crossing construction specifications will be utilized for streams encountered within wetland areas.

3.1.2.2 Trenching

- Wooden mats or boards will be placed in wetland areas to reduce impacts to wetland vegetation and soils. All construction equipment and vehicles will be restricted to these mats.
- Topsoiling and ditching will be accomplished using a backhoe or dragline, operating from mats.
- Wetland topsoil will be removed to a depth of 12" and for the width of the trenchline and stockpiled in the adjacent wetland within the ROW.
- The trench will be dug to a depth sufficient to cover the pipe with a minimum of 42" of backfill.
- Trench spoils will be sidecast into the adjacent wetland, segregated from the topsoil.

3.1.2.3 Pipeline Installation

- Pipe sufficient to cross a wetland will be made-up (strung, welded, and x-rayed) on the adjacent upland ROW.
- The made-up section(s) of pipe will be installed by carrying or dragging the pipe into place. To carry and lower the pipe into the trench, side-booms or similar equipment will be operated from mats. To drag the pipe into the trench, the previously made-up pipe will be floated into place using a push/pull method.
- The pipe will be weighted by means of a concrete-coating or concrete weights to prevent flotation, as needed.

3.1.2.4 Backfill

- Well-compacted trench breakers will be installed at all wetland boundaries. Breakers will minimize upland drainage along the pipeline into the wetland areas.
- The stockpiled subsoil will be returned the ditch, followed by replacement of the topsoil.
- Although pipeline padding is generally unnecessary in wetlands, the need for padding will be determined on a site specific basis by the chief inspector and an environmental monitor.

3.1.2.5 Cleanup and Restoration

- Excess spoil materials will be removed from the wetland and spread on the adjacent upland ROW.
- Contours will be restored to original preconstruction elevations.
- All construction mats, and other materials and supplies, as well as woody materials from clearing and grading activities will be removed from the wetland area.
- Generally, revegetation of the wetland ROW will not be necessary. Typically, the wetland area will revegetate naturally within one to two years after construction is completed.
- Final cleanup will be conducted as weather conditions permit.

3.2 Stream-Crossing Construction Procedures

Construction procedures for crossings of streams and rivers have been designed based on the depth, width, and flow of the water bodies. These procedures have been specifically developed to minimize the impacts of construction activities on water bodies by allowing for quicker completion of trench excavation, pipe installation, and backfilling operations while controlling excessive erosion and sedimentation.

A wet-ditch construction method (Figure 9) has been selected for most stream crossings. A (Figure 10) has been selected for major waterways, except the Missouri River. A modification to the shallow water crossing method has been adopted for the crossing of the Marias River (Figure11). The pipeline will be installed under the Missouri River by directional drilling and construction activities will have no impact on this water body.

3.2.1 Wet-Ditch Construction Method

3.2.1.1 Clearing and Grading

- Sediment barriers will be installed across the pipeline ROW on either side of a streambank, approximately 50' upland to the waterway.
- A 50' vegetative buffer will be maintained until actual stream-crossing construction begins, except where a crossing for vehicles and construction equipment is placed.
- The degree of grading and the width of ROW disturbance will be minimized along the streambank.
- Streambank topsoil will be removed and stockpiled behind an earthen berm in the adjacent upland area within the ROW.

3.2.1.2 Access

- In most cases, the stream crossings are narrow. Flume pipe culverts or temporary bridges will be installed across the streams to provide access to the work areas on

both sides of the stream. This will also minimize streambank degradation and erosion, and sediment flow into the waterway. Culverts will be stabilized using clean gravel. Sand bags will be used to channel the upstream flow through the culvert(s) and to stabilize the trailing edges of the culvert(s).

- Low-flow streams or streams with solid rock or gravel channels may be crossed without the installation of flumed access points.
- All equipment will be cleaned and inspected prior to entering a stream, and no leaking equipment will be allowed within the waterway.
- Refueling of equipment will not be conducted within 100' of any streambank.

3.2.1.3 Trenching

- Trenching will be accomplished using a backhoe which will only enter the stream as necessary to complete the work.
- The trench will be dug to a depth sufficient to cover the pipe with a minimum of 48" of backfill.
- Trench spoil will be removed from the streambed, and stockpiled and segregated from the streambank topsoil in the adjacent upland area behind an earthen berm lined with silt fence.

3.2.1.4 Pipeline Installation

- Pipe sufficient to cross the stream will be made-up (strung, welded, and x-rayed) on the adjacent upland ROW.
- The made-up section(s) of pipe will be carried and lowered into the trench using side-booms or similar equipment.
- The pipe will be weighted by means of a concrete-coating or concrete weights to prevent flotation, as needed.

3.2.1.5 Backfill

- Backfilling is generally accomplished using a backhoe.
- Once the pipe is placed in the trench, the spoil material will be used to backfill the trench.
- Sand, gravel, or dirt will be used as padding where rock is present in the trench.

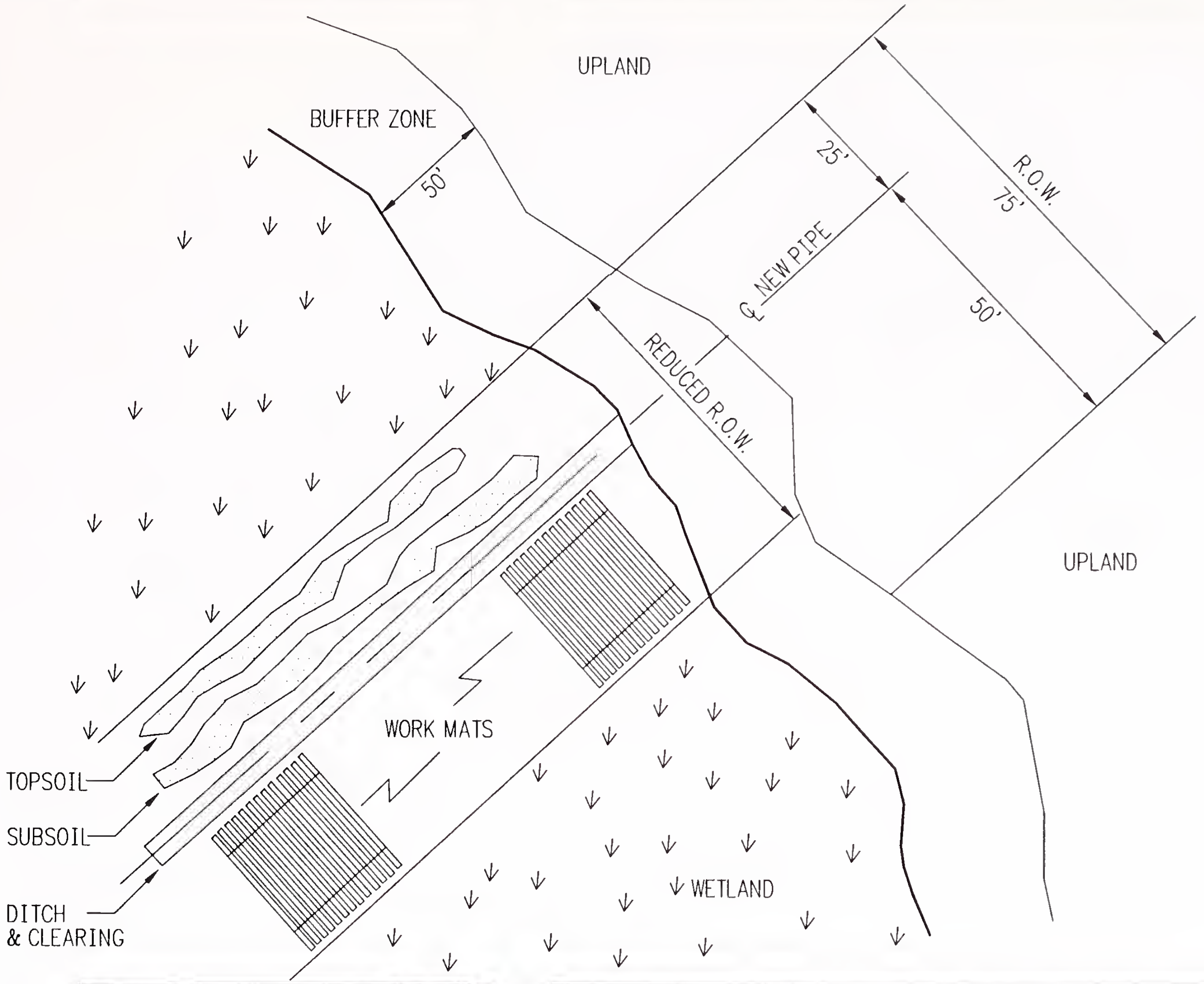
3.2.1.6 Cleanup and Restoration

- Construction equipment and debris will be removed from the streambed and banks.
- Streambeds and banks will be restored to preconstruction contours where possible.
- Streambank topsoil will be replaced.
- Streambanks will be seeded and mulched. Jute matting or other suitable erosion control materials will be utilized to anchor streambank areas with unstable soils.
- Riprap or similar type material will be installed along streambanks subject to stream-flow erosion and generally where streambanks have a slope steeper than

2:1. Riprap will be placed from the streambed to the top of the streambank. The riprap will be of sufficient size to prevent transport by the stream flow.

3.2.2 Dry-Ditch Construction Method

The dry-ditch construction method would follow the same steps as the wet-ditch method, except the stream flow would be diverted through culverts to bypass the ditchline (Figure 12). As a modification to the "310 Permit", this construction method was approved by the Judith Basin County Conservation District and MDFWP personnel for all perennial stream crossings in Judith Basin County.



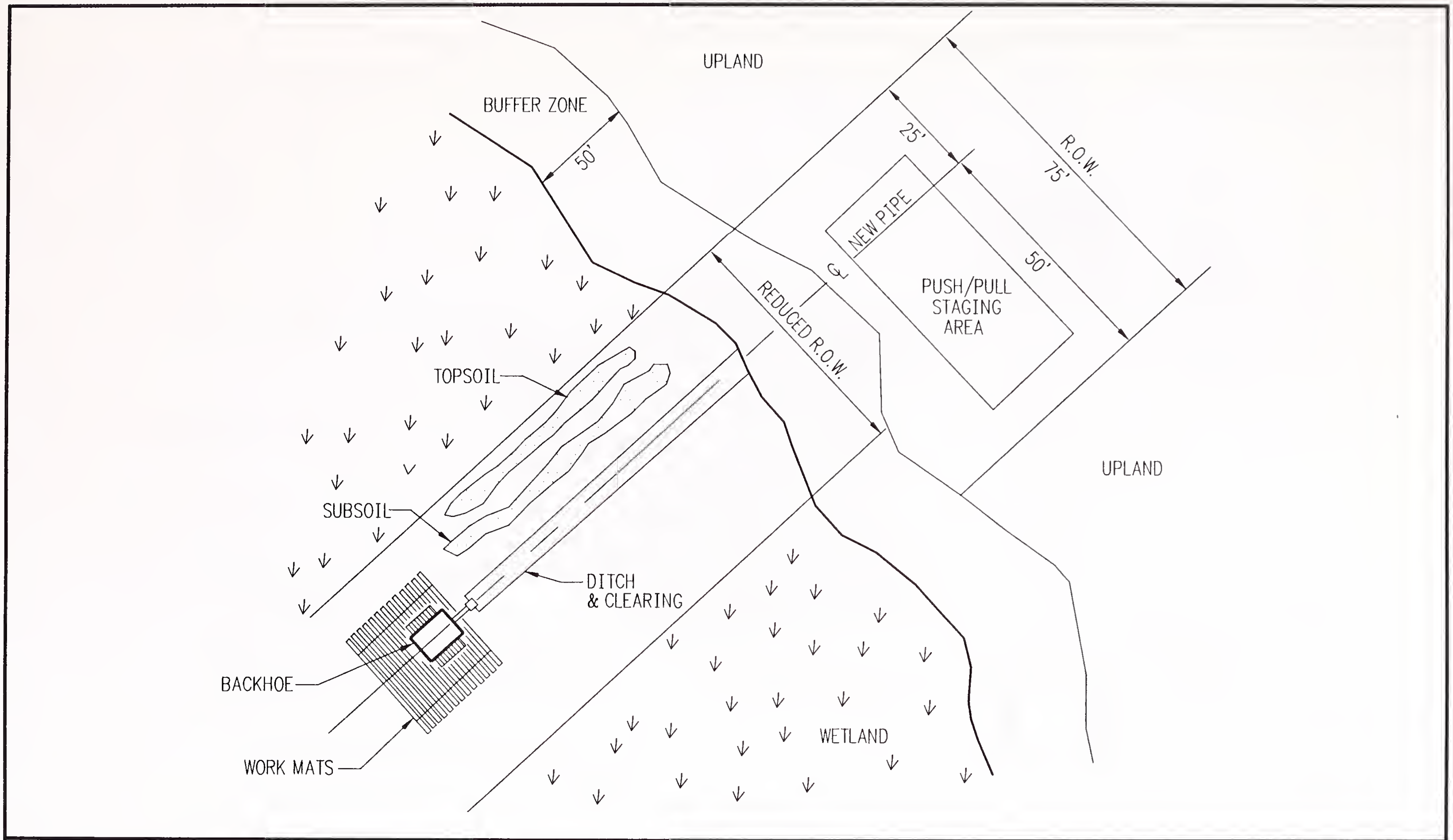
CLIENT
CENEX Pipeline Company
FRONT RANGE PIPELINE

DESCRIPTION
STANDARD WETLAND CROSSING - SIDEBOOM METHOD

SCALE: NONE | REVISION DATE: 2/2/95 | DRAWN BY: R. CLIFT | DATE DRAWN: 2/2/95 | FILE NAME: A697M002 | REV: A

PREPARED BY
TRIGON ENGINEERING INC
DENVER COLORADO

FIGURE 7

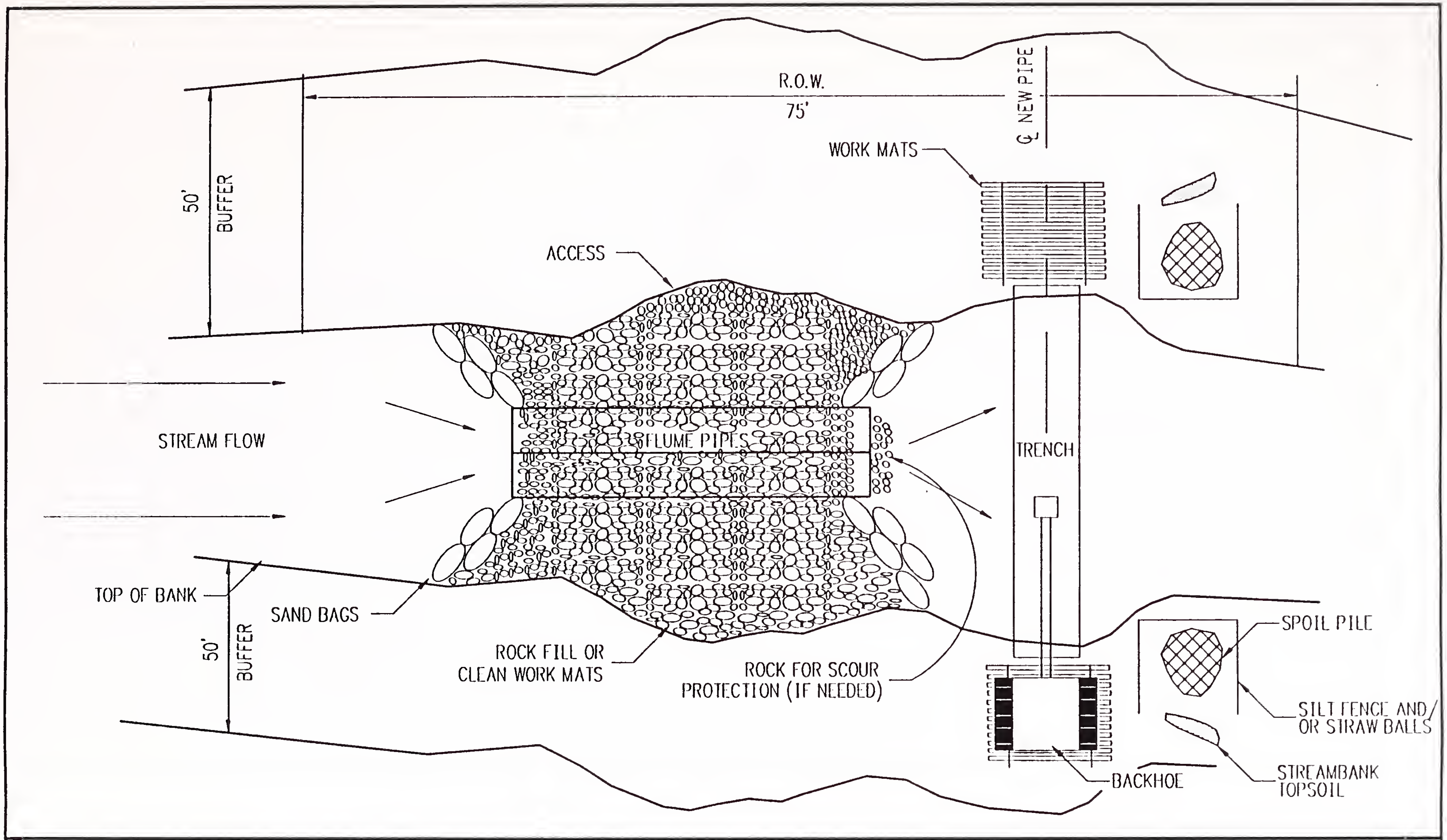


CLIENT **CENEX** Pipeline Company FRONT RANGE PIPELINE	DESCRIPTION STANDARD WETLAND CROSSING – PUSH/PULL METHOD

SCALE: NONE	REVISION DATE: 2/2/95	DRAWN BY: R. CLIFT	DATE DRAWN: 2/2/95	FILE NAME: A697M003	REV: A

PREPARED BY
TRIGON ENGINEERING INC
DENVER COLORADO

FIGURE 8



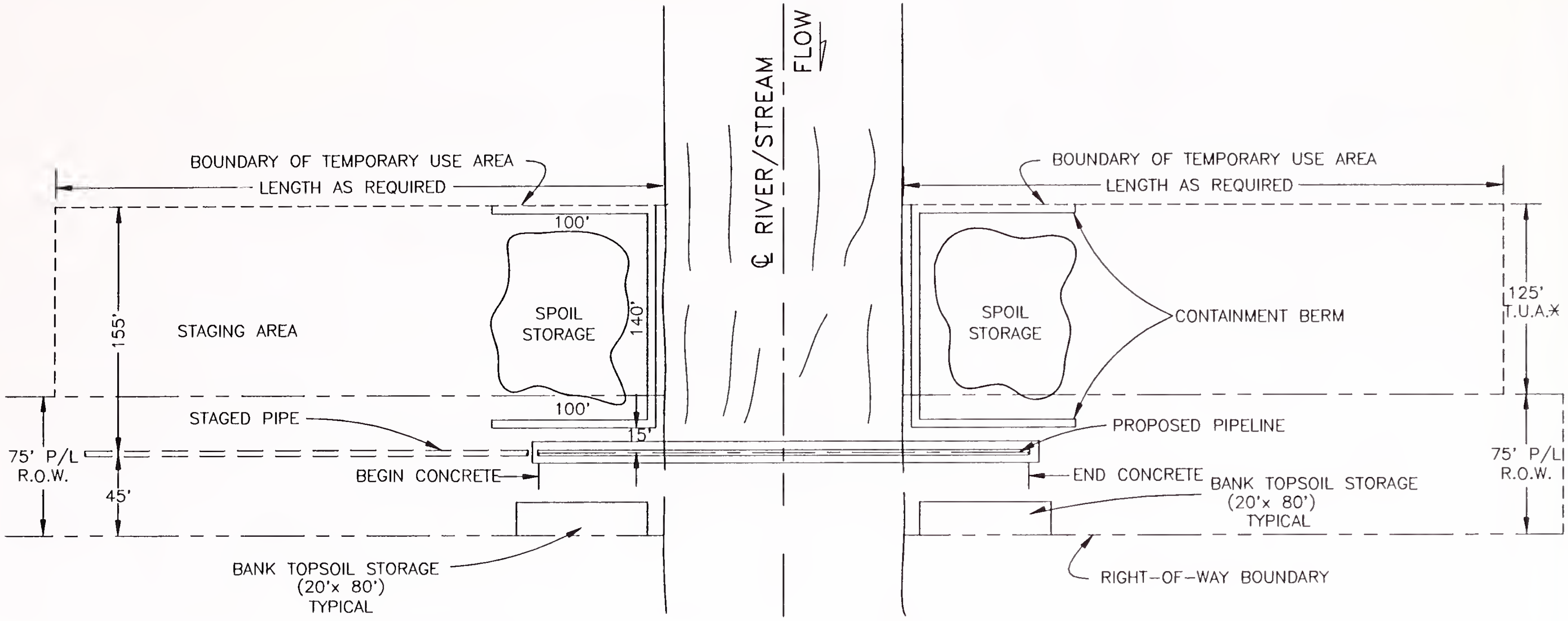
CLIENT **CENEX** Pipeline Company
FRONT RANGE PIPELINE

DESCRIPTION
STANDARD WET DITCH CROSSING USING A CULVERT

SCALE: NONE
REVISION DATE: 2/2/95
DRAWN BY: A. MAZZOTTI
DATE DRAWN: 2/2/95
FILE NAME: A697M004
REV: A

PREPARED BY
TRIGON ENGINEERING INC
DENVER COLORADO

FIGURE 9



PLAN VIEW OF PROPOSED CROSSING LOCATION

CLIENT
CENEX Pipeline Company
FRONT RANGE PIPELINE

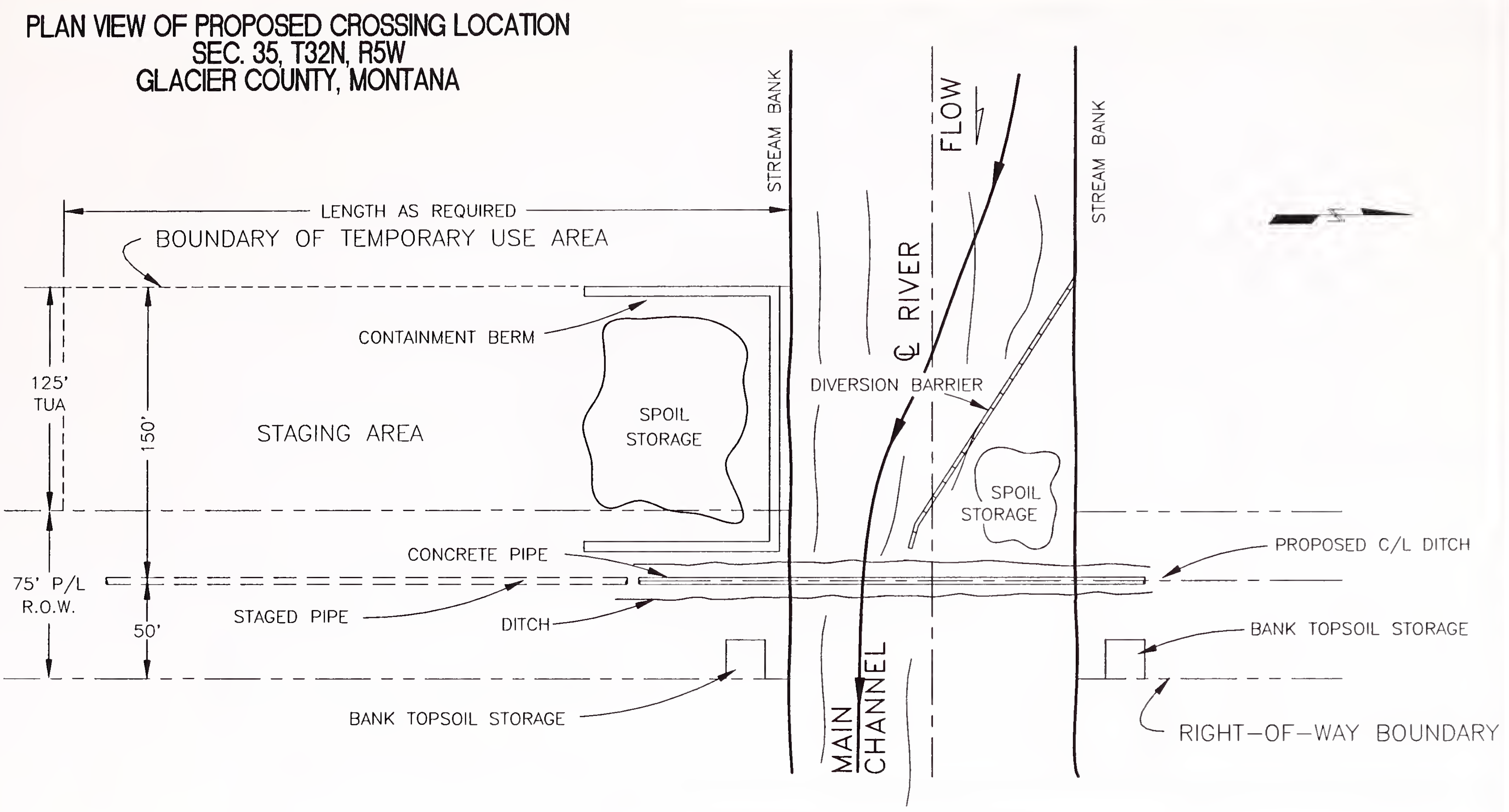
DESCRIPTION
TYPICAL MAJOR SHALLOW WATER CROSSING METHOD

SCALE: NONE	REVISION DATE:	DRAWN BY: L.COLLINS	DATE DRAWN: 3/10/95	FILE NAME: A697M013	REV: 0

NOTE:
* T.U.A., TEMPORY USE AREA

PREPARED BY
TRIGON ENGINEERING INC
DENVER COLORADO

FIGURE 10



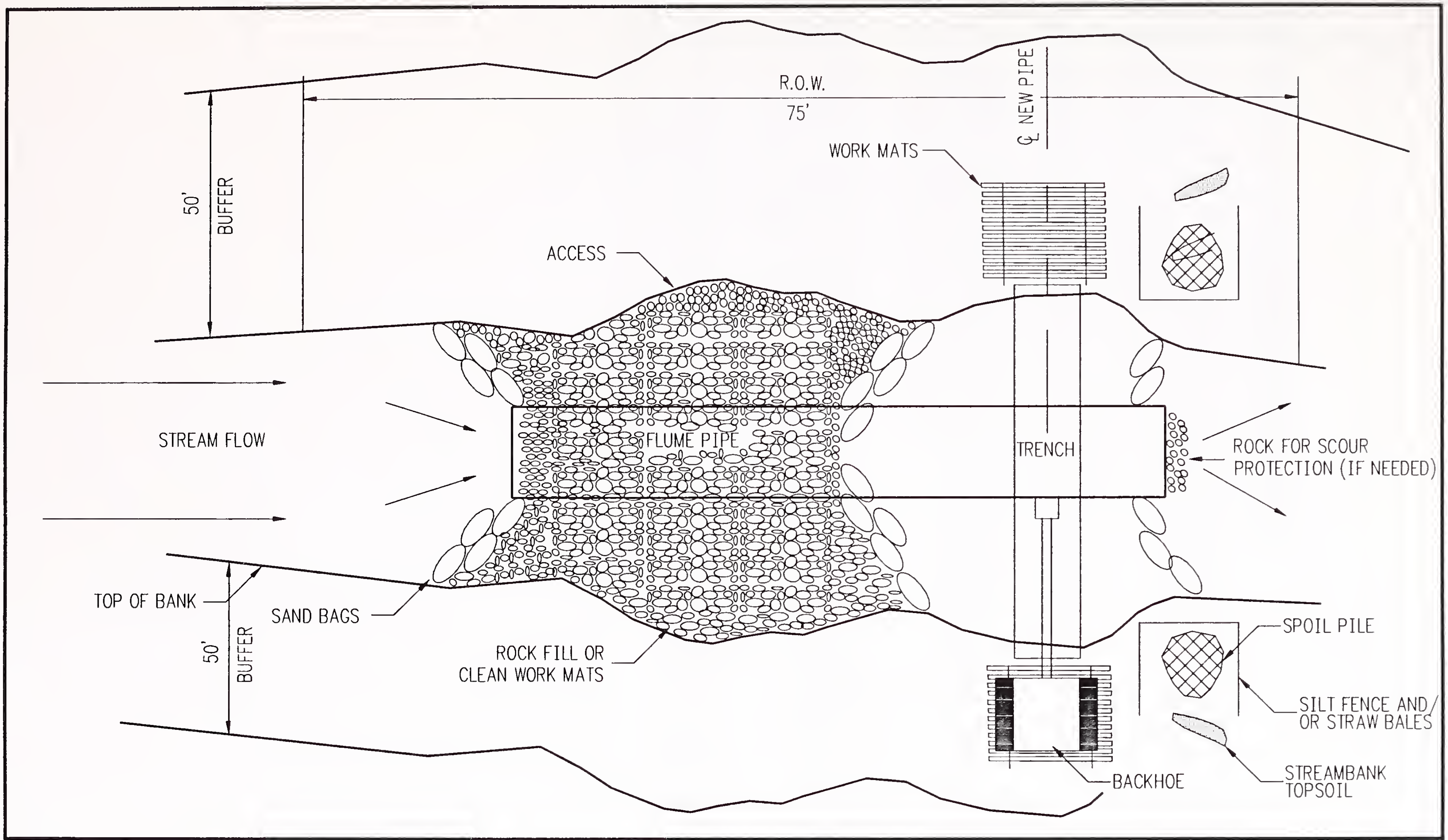
CLIENT **CENEX** Pipeline Company
FRONT RANGE PIPELINE

DESCRIPTION
16" CRUDE OIL PIPELINE - MARIAS RIVER CROSSING

SCALE: NONE	REVISION DATE:	DRAWN BY: R. CLIFT	DATE DRAWN: 6/16/95	FILE NAME: A697M018	REV: 0

PREPARED BY
TRIGON ENGINEERING INC
DENVER COLORADO

FIGURE 11



CLIENT
CENEX Pipeline Company
FRONT RANGE PIPELINE

DESCRIPTION
STANDARD DRY DITCH CROSSING METHOD

SCALE: NONE	REVISION DATE: 6/30/95	DRAWN BY: A. MAZZOTTI	DATE DRAWN: 2/2/95	FILE NAME: A697M005	REV: 0

PREPARED BY
TRIGON ENGINEERING INC
DENVER COLORADO

FIGURE 12

4.0 MONITORING, RECORDING AND REPORTING

During construction, qualified personnel (provided by the permittee) shall inspect disturbed areas, structural control measures, and locations where vehicles access the ROW at least once every seven (7) calendar days and within 24 hours of any precipitation and/or snow melt event which exceeds 0.5 inches.

During stormy periods or periods of snow melt when runoff occurs daily, all erosion control facilities shall be inspected by or under the direction of the permittee daily.

Storm water runoff discharges shall be visually monitored at the above frequency to evaluate the effectiveness of the pollution control facilities or practices. If any measurable quantities of sediment are leaving the property, corrective action shall be taken within 24 hours to reduce the discharge of sediments.

An inspection report shall be prepared and signed by the inspector following each inspection and shall be certified in accordance with Parts IV.G. and IV.H. of the MPDES Storm Water General Discharge Permit. This record shall be available to the Department upon request. Copies of the inspection reports shall be retained at the construction site, except when the project is shut down for the season.

Following final stabilization of this construction project, all records and information resulting from monitoring activities required by this permit shall be retained by Cenex, Inc. for a minimum of three years, or longer if requested by the Department. Copies of all records shall be provided to the Department upon request.

A copy of this plan will be maintained at the construction site for the life of the project.

CENEX, INC.
FRONT RANGE PIPELINE PROJECT
SANTA RITA TO LAUREL, MONTANA

CERTIFICATION STATEMENT

"I certify under penalty of the law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Facility Operator:

Mick Gee Date
Cenex, Inc.

CENEX, INC.
FRONT RANGE PIPELINE PROJECT
SANTA RITA TO LAUREL, MONTANA

CONTRACTOR CERTIFICATION STATEMENT

I certifiy under penalty of law that I understand the terms and conditions of the general Montana Pollutant Discharge Elimination System (MPDES) permit that authorizes the storm water discharges associated with construction activity from the construction site identified as part of this certification. Further, by my signature, I understand that I am becoming a co-permittee, along with the owner(s) and other contractors and subcontractors signing such certifications, to the general MPDES permit for the storm water discharges associated with construction activity from the identified site. As a co-permittee, I understand that I, and my company, are legally required under the Clean Water Act to ensure compliance with the terms and conditions of the storm water erosion control plan developed under the MPDES permit and the terms of the MPDES permit.

Contractor (Name, Title and Company):

Date

Subcontractor (Name, Title and Company):

Date

Subcontractor (Name, Title and Company):

Date

Subcontractor (Name, Title and Company):

Date

APPENDIX D

Weed Control Plan

NOXIOUS WEED CONTROL PLAN

FOR

CENEX, INC.
FRONT RANGE PIPELINE PROJECT
SANTA RITA TO LAUREL, MONTANA

PREPARED BY

TRIGON ENGINEERING INC.
1099 18TH STREET, SUITE 1700
DENVER, CO 80202

FEBRUARY 1995

NOXIOUS WEED CONTROL PLAN

CENEX, INC.
FRONT RANGE PIPELINE PROJECT
SANTA RITA TO LAUREL, MONTANA

GENERAL CONTROL PLAN

The State of Montana has established regulations concerning noxious weed control under Title 7 of the state code in an effort to suppress proliferation of noxious weeds within the state. The code requires an appointment of district weed boards that approve of weed control programs in each county. A noxious weed control program must be submitted to the county weed board for approval prior to commencement of any construction project involving soil disturbance. Cenex, Inc. (Cenex) is dedicated to working with the county weed board supervisors and private landowners to develop and implement an approved noxious weed control plan which meets the statutory requirements of Title 7 and the concerns of the landowner.

Project Description

Cenex has proposed the construction of a new steel 16" crude oil pipeline from the Santa Rita Terminal to the Laurel Refinery, Montana for the purpose of providing sufficient pipeline capacity to transport crude oil produced in Northern Montana and in Alberta, Canada to refineries in the Laurel/Billings, Montana area. The construction of this pipeline is scheduled to begin in June 1995. The pipeline and ancillary facilities should be complete and operational by November, 1995. The proposed pipeline will be approximately 285 miles in length and will span nine counties in Montana: Glacier, Toole, Pondera, Teton, Cascade, Judith Basin, Wheatland, Stillwater and Yellowstone counties.

Application Program

Cenex's weed control program consists of a two-time application program associated with construction operations, followed by annual spot spraying of the right-of-way (ROW) on an as needed basis for three years. Initially, the ROW would receive an application of the herbicide 2,4-D at least 10-14 days prior to construction. The spray will be applied at a rate of two quarts of 2,4-D per acre and two quarts of L1700 Surfactant per 100 gallons of water. In some areas landowners require utilization of different chemicals due to certain circumstances.

Revegetation Program

After reclamation and stabilization, the ROW will be reseeded with an approved weed-free seed mix. Seed will be drilled or broadcast and rolled in the ROW. A mixture developed on the recommendations of the district weed board, American Soil Conservation Service,

and the county agent will be utilized. Except where specified by the landowner, or in wetlands, the following seed mix and application rates will be utilized for these areas:

Native Rangeland

Species	Percent of Mix	Application Rate*
Western Wheatgrass	65%	3.9
Slender Wheatgrass	10%	6
Green Needlegrass	25%	1.5

*pounds per acre, pure live seed

Dry Pastureland

Species	Percent of Mix	Application Rate*
Pubescent Wheatgrass	58%	7.0
Smooth Bromegrass	42%	5.0

*pounds per acre, pure live seed

Irrigated Pastureland

Species	Percent of Mix	Application Rate*
Orchardgrass	43%	3.0
Clover	57%	4.0

*pounds per acre, pure live seed

Salty Bottomland Rangeland

Species	Percent of Mix	Application Rate*
Tall Wheatgrass	66.5%	10.0
Shoshoni Wildrye	33.5%	5.0

*pounds per acre, pure live seed

Maintenance Program

Upon establishment of a stand of grasses in the 6-8 leaf stage, a second application of herbicide will be applied during year 1 to areas infested with noxious weeds. The application will consist of two quarts per acre of Tordon 22K or one quart of Tordon 22K with one quart of 2,4-D per acre added to two quarts of L1700 Surfactant per 100 gallons of water. Chemical applications to destroy noxious weed infestations may require dilution to prevent destruction of native grasses and adverse affects to cultivated lands.

For the subsequent two years, the ROW will be checked on an annual basis for noxious weed infestations. These areas will be spot sprayed on an as needed basis. The

application rate will be two quarts of Tordon 22K per acre or one quart of Tordon 22K and one pound of 2,4-D added to two quarts of L1700 Surfactant per 100 gallons of water. The chemical application program will be contracted to a local herbicide applicator(s). Persons applying chemicals to noxious weeds in Montana must be certified in chemical use by the Montana Department of Agriculture. Herbicide use is not restricted in Montana except when the chemical label instructions prohibit the use of a product in areas containing water. Herbicides will not be applied directly to or near surface waters or wells. Herbicides selected by landowners must be applied within chemical label guidelines.

As a part of the weed control program, Cenex will further prevent the spread of noxious weeds by thoroughly spray washing all construction equipment and vehicles before permitting them to enter the State of Montana and the ROW. All vehicles and equipment will be spray washed before traveling from one county to another. Any equipment or vehicles operating in a noxious weed infestation area will be spray washed before moving to areas devoid of such infestations.

NOXIOUS WEED GROUPS

The State of Montana maintains a statewide list of noxious weeds which are categorized into three groups. Category 1 species are currently established and generally widespread throughout the state. Category 2 species are recently introduced and capable of spreading rapidly. Category 3 species are those that may not be detected or occur only as scattered localized infestations. County weed board supervisors have identified the major problem species in each county and may form a list of additional species which cause specific problems in that county. Those species identified by the county weed board supervisors as causing the worst infestations in disturbed areas along the proposed pipeline route are all Category 1 species and are described in the following list.

Category 1 Species

Leafy Spurge

Leafy spurge (*Euphorbia esula*) is a creeping perennial that reproduces by seed and has an extensive root system that may extend 30 feet into the ground. Although typically associated with riparian sites in Montana, leafy spurge sometimes inhabits rangelands and pastures. This species is extremely difficult to control and represents the most serious weed threat along the proposed pipeline corridor.

Spotted Knapweed

Spotted knapweed (*Centaurea maculosa*) is a simple perennial that reproduces from seed and forms a new shoot each year from a taproot. Although this species typically inhabits floodplains with light-textured, well-drained soils, it may also inhabit pastures, meadows, and stony hillsides.

Russian Knapweed

Russian knapweed (*Acroptilon repens*) is a perennial with widely spreading horizontal roots that reproduces by seed and creeping. It is found in cultivated fields and along ditch banks, fence rows, and roadsides.

Canada Thistle

Canada thistle (*Cirsium arvense*) is a creeping perennial which reproduces by seed and fleshy, horizontal roots. The extensive underground root system makes eradication difficult. Infestations are found along roadsides and in cultivated fields, riparian areas, and rangelands.

Dalmation Toadflax

Dalmation toadflax (*Linaria dalmatica*) is a perennial that reproduces by seed and underground root stalks. Waxy leaves and an extensive underground root system make this species difficult to eradicate. The plant may be found along roadsides, cultivated fields, and rangelands.

Field Bindweed

Field bindweed (*Convolvulus arvensis*) is a perennial that reproduces by seed. A long deep taproot with an extensive root system and seeds that live up to 50 years make this species difficult to eradicate. The species most often presents a problem in cultivated fields where it may climb and form dense tangled mats.

Other Problem Species

The following species were noted by county weed supervisors as occasionally causing problems in spotty locations along the proposed pipeline route area:

Diffuse Knapweed (*Centaurea diffusa*)
White top (*Cardaria draba*)
Yellow Toadflax (*Linaria vulgaris*)
Houndstongue (*Cynoglossum officinale*)
Burrdock (*Articum minus*)
St. Johnswort (*Hypericum perforatum*)
Showy Milkweed (*Asclepias syriaca*)
Poison Hemlock (*Conium maculatum*)
Musk Thistle (*Cartus nutans*)
Scotch Thistle (*Onopordum acanthium*)
Perennial Sowthistle (*Sonchus arvensis*)
Common Teasel (*Dipsacus fullonum*)
Water Hemlock (*Cicuta douglasii*)
Tansy Ragwort (*Senecio jacobaea*)
Milk Thistle (*Silybum marianum*)
Yellow Mignonette (*Reseda lutea*)

Category 2 Species

In Montana certain plants have been designated as Category 2 species. These are plants that have recently been introduced into Montana and are capable of rapid spreading. Dyers woad (*Isatis tinctoria*), purple loosestrife (*Lythrun salicaria* & *L. virgatum*), and sulfur cinquefoil (*Potentilla recta*) have been listed by the state as Category 2 species. Preventive measures to reduce the likelihood of accidental seed introduction of such species include thorough spray washing of all construction equipment and vehicles before allowing passage into the State of Montana or from one county to the next.

Category 3 Species

Category 3 species are those which have not been detected often and occur only as scattered localized infestations. Yellow Starthistle (*Centaurea solstitialis*), Common Crupina (*Crupina vulgaris*), and Rush Skeletonweed (*Chondrilla juncea*) have been listed by the state as such species. These plants can cause serious localized infestations. If encountered, the county weed supervisor will be notified of the infestation location and consulted for appropriate control methods to be applied.

COUNTY PROBLEM AREAS AND SPECIES

The major problem species of noxious weeds and specific problem areas in each county have been identified and are briefly discussed below.

Glacier County

Russian knapweed is a problem along the Marias River and Cut Bank Creek, and in the area south of Cut Bank. Spotted knapweed is present along the Marias River, Cut Bank Creek, and in the Santa Rita area. Leafy Spurge may be a problem along the Marias River or Cut Bank Creek. Canada thistle is found mostly at road crossings and field edges.

Application of Tordon will be restricted to areas upland of stream high water marks. Roundup and 2,4-D will be utilized below the high water mark.

For pasture/rangeland, apply Tordon plus 1 quart 2,4-D without surfactants per acre.

Pondera County

The major problem weeds for Pondera County are leafy spurge and spotted knapweed. Infestations of spotted knapweed are of major concern adjacent to the Marias River and the Dry Fork of the Marias River. To control this problem weed, the ROW should be treated with an application of one pint per acre of Tordon prior to construction, followed by annual treatments at the same rate for a period of 4 years after completion of construction activities. An amine based herbicide will be utilized near surface waters.

Teton County

Russian knapweed and spotted knapweed are the major species of concern in the Teton River Valley. Application of the herbicide Transline, which does not affect cottonwood trees, deer browse, or pheasants, is typically preferred to control problem weeds in this area.

Cascade County

In Cascade County, leafy spurge and spotted knapweed are encountered in riparian areas of native rangelands. Intense infestations of spotted knapweed are located in the Belt Creek riparian areas. Canada thistle is usually encountered in upper drier areas. Field bindweed is a problem species in cropland areas. Whitetop infestations may be encountered along the railroad northeast of Great Falls.

Judith Basin County

Several species present priority problems in Judith Basin County. Leafy spurge and spotted knapweed may be encountered in stream drainages. Whitetop and Canada thistle may be encountered in a spotty distribution. Infestations of yellow mignonette are present along the Judith River drainage and recently has become prevalent in the Utica area. Yellow mignonette occurs in hayfields and cultivated fields, along county roads, and in riparian areas.

The Judith Basin County Weed Board recommends the following herbicide applications:

- In year 1, apply 2 quarts of 2,4-D to all areas; for spurge areas, mix with 1 pint of Tordon 22K; for yellow mignonette and whitetop, mix with 2 ounces of Alley; and for knapweed areas, mix with 2 ounces of Tordon 22K; and
- For the subsequent two years, spot spray with the above listed mixes.

Wheatland County

No major problem areas have been identified in Wheatland County. Occasional infestations of spotted knapweed, leafy spurge, and toadflax may be encountered.

Golden Valley County

Field bindweed and Canadian thistle are present along creek drainages and occur in a spotty distribution along roadsides. The ridge immediately north of the Big Coulee Creek crossing is infested with Dalmation toadflax. Leafy spurge, once present in this same area, has been eradicated for several years through use of herbicide treatments.

Stillwater County

The major problem weeds for Stillwater County are leafy spurge, spotted knapweed, and Dalmation toadflax. Leafy spurge is present on the Stillwater drainage and is moving downstream along the Yellowstone River causing problems on islands and adjacent land. Spotted knapweed is present in all adjacent counties and attempts are being made to prevent its establishment in this county. Dalmation toadflax has been introduced from western areas of Montana and now is present along I-90 and the Burlington Northern Railroad. Other problem species in the county are field bindweed, whitetop, Russian knapweed, diffuse knapweed, houndstongue, and burdock.

Yellowstone County

The major problem areas along the proposed pipeline route within Yellowstone County are the Burlington Northern Railroad, Interstate Highway 90, Big Ditch, Italian Ditch, and Cove Ditch. Leafy spurge, spotted knapweed, Russian knapweed, whitetop, and Canada thistle are the major problem species in these areas. Whitetop and Canada thistle are primarily encountered along Interstate Highway 90 and the Burlington Northern Railroad; however,

these species are sometimes encountered along ditchbanks. Leafy spurge, spotted knapweed, and Russian knapweed are present along the ditchbanks, highways, and railroads.

The following herbicide mixtures are recommended for noxious weed control in Yellowstone County:

- 2 quarts of 2,4-D per acre for spotted knapweed and field bindweed;
- 1 pint of Tordon 22K + 1 quart of 2,4-D per acre for Canada, Scotch, and Musk thistles, burdock, cinquefoil, common toadflax, houndstongue, fringed sagebrush, rabbitbrush, and snakeweed;
- 1 quart of Banvel + 1 quart of 2,4-D per acre for whitetop; and
- 2 quarts of Tordon 22K per acre for Dalmation toadflax, Russian knapweed and leafy spurge.

Weed-free seed will be broadcast and roller packed a minimum of 3 times to pack the seed 1/4 inch into the soil. Seeding will be performed in November through March or as authorized by the Weed District.